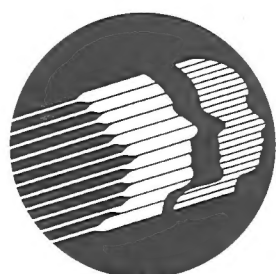


# ***Health Status of Hispanics in Delaware***



**DELAWARE HEALTH  
AND SOCIAL SERVICES**

*July 2001*



# Health Status of Hispanics in Delaware

July 2001

OMH-RC-Knowledge Center  
5515 Security Lane, Suite 101  
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1-800-444-6472



***Delaware Health & Social Services  
Division of Public Health &  
Division of Management Services***

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**The Honorable Vincent P. Meconi, Secretary  
*Delaware Health & Social Services***

**The Honorable Ruth Ann Minner, Governor  
*State of Delaware***



## Purpose and Contents of the Report

This is the second in a series of reports looking at the health status of racial and ethnic minorities in Delaware. The first, *Health Disparities in Delaware*, focused on the health status gap between Whites and Blacks as measured by twelve health indicators.

The purpose of the present report is to examine the health status of Hispanic persons in Delaware using three data systems: birth certificate records, death certificate records, and inpatient hospital discharge records. The report also includes some basic data on the growth of the Hispanic population from 1990 to 2000.

At 4 percent of the population, Hispanics make up the second largest racial and ethnic minority group in Delaware. This population has seen impressive growth over the past decade. In 1990, there were a total of 15,820 Hispanics in Delaware. The 2000 census put the current Hispanic population at 37,277. This marks a 135.6 percent growth in the intervening ten years. Even so, the population continues to be small enough to make computation of rates in several disease categories difficult due to the small number of actual cases.

For example, there were 32,211 deaths to Delaware residents in the five-year period from 1994 to 1998. Out of this total, there were 312 deaths to Hispanics. Because of these relatively small numbers, the indicators included in this report are those for which there are enough events to calculate rates.

The report is divided into four data sections. The first section, *Population Statistics*, contains some comparative data from the 1990 and 2000 census counts. The second section, entitled *Birth-Related Statistics*, contains a number of indicators from birth records that examine maternal and infant health at or around the time of birth (e.g., low birth weight, prenatal care, infant mortality, etc.). The third section, *Death Statistics*, contains information on the leading causes of death for Hispanics as well as age-adjusted death rates for the six leading causes. Finally, the fourth section, entitled *Preventable Hospitalizations*, contains age-adjusted hospital discharge rates for the six leading preventable hospitalizations for Hispanics. Preventable hospitalizations have been studied extensively by Billings and his colleagues<sup>[1,2]</sup> among others. They are often used as indicators of potential barriers to primary health care.

In each section, data for White non-Hispanics and Black non-Hispanics are presented for comparison purposes. It is important to note that birth and death statistics for these two groups will not match exactly with previously released statistics for the categories White and Black because previous reports did not separate out persons of Hispanic origin from these groups. Where possible, national data are cited for comparison.

Data for indicators in the *Birth-Related Statistics*, *Death Statistics*, and *Preventable Hospitalizations* sections are presented as simple bar graphs that show the rate or percent for Hispanics, White non-Hispanics, and Black non-Hispanics. The rate

and number of cases on which the rate is based are shown above the bar for each group.

At the end of the report, two additional sections are included. First, a *Technical Notes* section is included to provide the reader with more information on such issues as age-adjustment and population estimates used to calculate rates for this report. Finally, a list of *References* is included for readers interested in additional data.

## Summary of Findings

### ***Population Statistics***

- The Hispanic population grew from 15,820 in 1990 to 37,277 in 2000, an increase of 135.6%. Among the counties, Sussex showed the largest percent increase at 368.5%.
- The three census county divisions with the fastest growing Hispanic populations were Georgetown (1536.2%), Selbyville-Frankford (815.7%), and Millsboro (670.0%).

### ***Birth-Related Statistics***

- The teen birth rate for Hispanic mothers in Delaware was higher than rates for White non-Hispanic mothers.
- Hispanic mothers were the least likely to receive their first prenatal visit in the first trimester of pregnancy.
- Hispanic mothers had the lowest smoking rate during pregnancy among the three groups.
- Delaware's Hispanic mothers had the highest percent of self pay deliveries. Self pay is generally regarded as an indicator of lack of insurance coverage.
- Hispanic mothers had the lowest infant mortality rate among the three groups.

### ***Death Statistics***

- Hispanic death rates for the chronic disease categories *Heart Disease*, *Cancer*, and *Stroke* were lower than rates for both White and Black non-Hispanics.
- The death rate for *AIDS* was 3.7 times higher for Hispanics than for White non-Hispanics.

### ***Preventable Hospitalization Statistics***

- The preventable hospitalization discharge rate for *Asthma* was 2.6 times higher for Hispanics than for White non-Hispanics.
- The discharge rate for *Diabetes* was 1.7 times higher for Hispanics than for White non-Hispanics.





# **Population Statistics**



**Table 1**  
**Population of Delaware by Race and Hispanic Origin, 1990 Census**

State/County/ Census County Division	Race and Hispanic Origin				
	All Persons	Hispanic	White Non-Hispanic	Black Non-Hispanic	Other Non-Hispanic
<b>Delaware</b>	666,168	15,820	528,092	111,011	11,245
<b>Kent County</b>	110,993	2,540	86,071	20,316	2,066
Central Kent	15,838	345	13,171	2,112	210
Dover	59,473	1,670	42,854	13,416	1,533
Felton	4,844	32	4,258	529	25
Harrington	9,018	84	7,626	1,258	50
Kenton	4,429	50	3,923	395	61
Milford North	6,758	165	5,238	1,262	93
Smyrna	10,633	194	9,001	1,344	94
<b>New Castle County</b>	441,946	11,804	350,312	71,895	7,935
Brandywine	80,434	1,039	72,404	5,393	1,598
Central Pencader	17,719	280	15,667	1,415	357
Greater Newark	61,003	1,018	54,083	4,180	1,722
Lower Christiana	36,543	796	32,057	3,456	234
Middletown-Odessa	18,578	233	15,557	2,681	107
New Castle	67,798	1,558	51,712	13,765	763
Piedmont	24,402	293	22,674	442	993
Pike Creek-Central Kirkwood	38,733	715	35,858	1,214	946
Red Lion	4,033	35	3,678	303	17
Upper Christiana	21,177	765	17,638	2,135	639
Wilmington	71,526	5,072	28,984	36,911	559
<b>Sussex County</b>	113,229	1,476	91,709	18,800	1,244
Bridgeville-Greenwood	6,899	225	5,477	1,164	33
Georgetown	7,776	127	6,034	1,559	56
Laurel-Delmar	15,086	108	12,791	2,086	101
Lewes	13,628	104	12,067	1,271	186
Milford South	14,044	259	11,016	2,659	110
Millsboro	12,897	70	10,389	2,025	413
Milton	7,671	255	6,004	1,358	54
Seaford	18,897	213	14,283	4,231	170
Selbyville-Frankford	16,331	115	13,648	2,447	121

Source: Center for Applied Demography and Survey Research, University of Delaware  
U.S. Census Bureau

Table 1 above and Table 2 (see page 10) show the enumerated population of Delaware by county, census county division, race, and Hispanic origin in the 1990 and 2000 censuses, respectively. Table 3 (see page 11) shows the percent change from 1990-2000. Figure 1 (see page 12) shows a map of the 2000 Hispanic population, whereas Figure 2 (see page 12) is a map showing the percent change from 1990-2000. Maps showing the location of the census county divisions appear as Figures 3-6 (see pages 13 and 14).

**Table 2**  
**Population of Delaware by Race and Hispanic Origin, 2000 Census**

State/County/ Census County Division	Race and Hispanic Origin				
	All Persons	Hispanic	White Non-Hispanic	Black Non-Hispanic	Other Non-Hispanic
<b>Delaware</b>	783,600	37,277	567,973	148,435	29,915
<b>Kent County</b>	126,697	4,069	91,325	25,770	5,533
Central Kent	18,267	541	14,416	2,600	710
Dover	66,555	2,423	42,956	17,480	3,696
Felton	5,493	105	4,682	568	138
Harrington	10,352	204	8,485	1,425	238
Kenton	5,337	84	4,781	339	133
Milford North	8,786	434	6,333	1,729	290
Smyrna	11,907	278	9,672	1,629	328
<b>New Castle County</b>	500,265	26,293	353,760	99,648	20,564
Brandywine	78,620	1,631	64,290	9,381	3,318
Central Pencader	32,096	985	24,652	5,033	1,426
Greater Newark	67,114	3,388	54,065	5,844	3,817
Lower Christiana	36,250	3,432	28,213	3,765	840
Middletown-Odessa	29,682	723	24,945	3,542	472
New Castle	82,021	5,423	49,448	24,119	3,031
Piedmont	29,388	498	26,232	774	1,884
Pike Creek-Central Kirkwood	42,312	1,840	36,531	1,885	2,056
Red Lion	5,589	156	4,506	784	143
Upper Christiana	24,529	1,069	17,526	3,976	1,958
Wilmington	72,664	7,148	23,352	40,545	1,619
<b>Sussex County</b>	156,638	6,915	122,888	23,017	3,818
Bridgeville-Greenwood	9,462	486	6,944	1,811	221
Georgetown	11,811	2,078	7,092	2,391	250
Laurel-Delmar	20,410	335	16,791	2,781	503
Lewes	21,517	387	19,365	1,302	463
Milford South	16,525	789	12,448	2,946	342
Millsboro	19,558	539	15,664	2,601	754
Milton	10,611	464	8,435	1,484	228
Seaford	22,498	784	15,415	5,628	671
Selbyville-Frankford	24,246	1,053	20,734	2,073	386

Source: Center for Applied Demography and Survey Research, University of Delaware  
U.S. Census Bureau

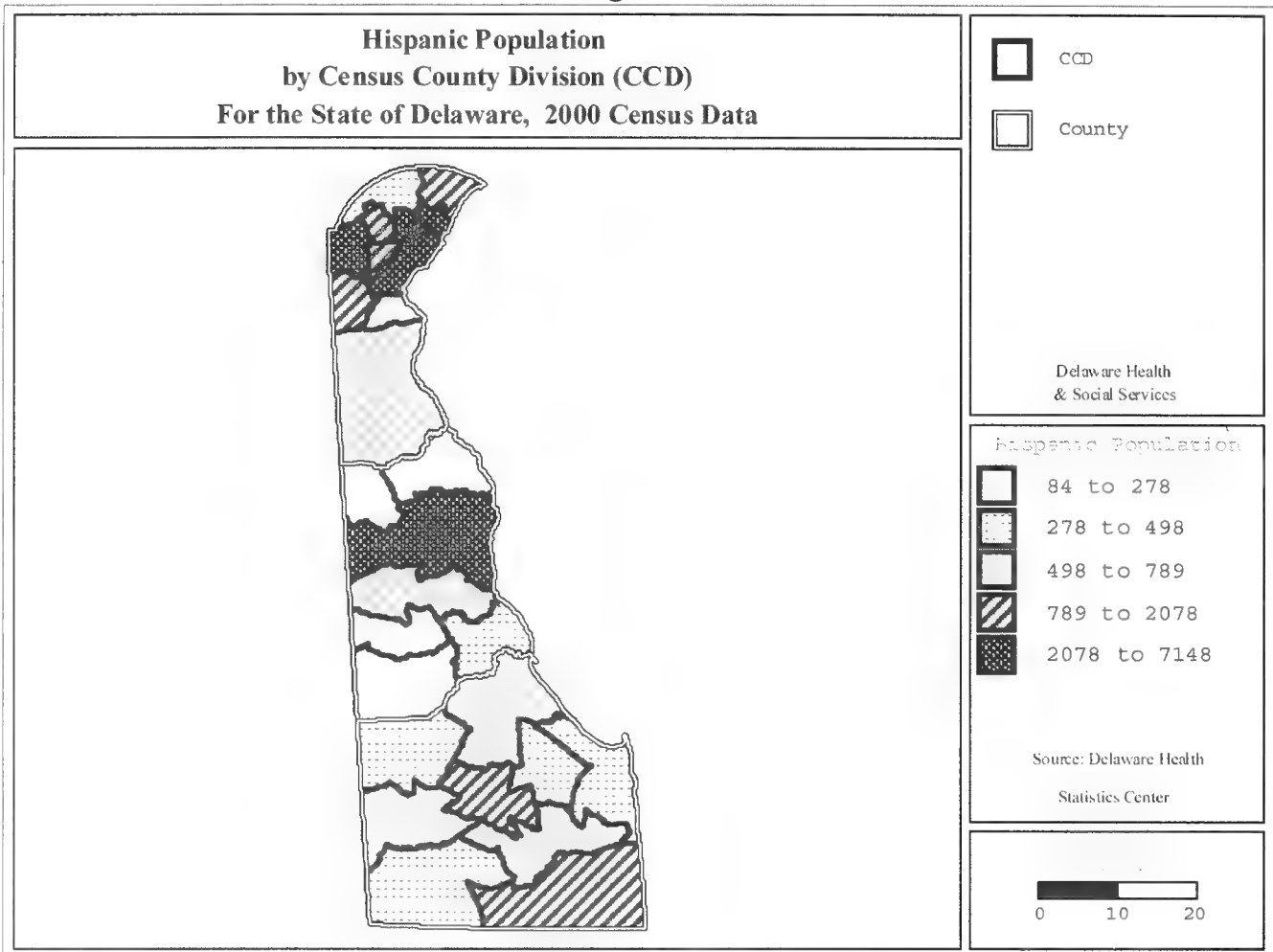
The Hispanic population grew from 15,820 in 1990 to 37,277 in 2000, an increase of 135.6%. Among the counties, Sussex showed the largest percent increase at 368.5%. The census county divisions that showed the greatest increases were Georgetown (1536.2%), Selbyville-Frankford (815.7%), and Millsboro (670.0%).

**Table 3**  
**Percent Change in the Population of Delaware by Race and Hispanic Origin,**  
**1990-2000**

State/County/ Census County Division	Race and Hispanic Origin				
	All Persons	Hispanic	White Non-Hispanic	Black Non-Hispanic	Other Non-Hispanic
<b>Delaware</b>	17.6%	135.6%	7.6%	33.7%	166.0%
<b>Kent County</b>	14.1%	60.2%	6.1%	26.8%	167.8%
Central Kent	15.3%	56.8%	9.5%	23.1%	238.1%
Dover	11.9%	45.1%	0.2%	30.3%	141.1%
Felton	13.4%	228.1%	10.0%	7.4%	452.0%
Harrington	14.8%	142.9%	11.3%	13.3%	376.0%
Kenton	20.5%	68.0%	21.9%	-14.2%	118.0%
Milford North	30.0%	163.0%	20.9%	37.0%	211.8%
Smyrna	12.0%	43.3%	7.5%	21.2%	248.9%
<b>New Castle County</b>	13.2%	122.7%	1.0%	38.6%	159.2%
Brandywine	-2.3%	57.0%	-11.2%	73.9%	107.6%
Central Pencader	81.1%	251.8%	57.3%	255.7%	299.4%
Greater Newark	10.0%	232.8%	0.0%	39.8%	121.7%
Lower Christiana	-0.8%	331.2%	-12.0%	8.9%	259.0%
Middletown-Odessa	59.8%	210.3%	60.3%	32.1%	341.1%
New Castle	21.0%	248.1%	-4.4%	75.2%	297.2%
Piedmont	20.4%	70.0%	15.7%	75.1%	89.7%
Pike Creek-Central Kirkwood	9.2%	157.3%	1.9%	55.3%	117.3%
Red Lion	38.6%	345.7%	22.5%	158.7%	741.2%
Upper Christiana	15.8%	39.7%	-0.6%	86.2%	206.4%
Wilmington	1.6%	40.9%	-19.4%	9.8%	189.6%
<b>Sussex County</b>	38.3%	368.5%	34.0%	22.4%	206.9%
Bridgeville-Greenwood	37.2%	116.0%	26.8%	55.6%	569.7%
Georgetown	51.9%	1536.2%	17.5%	53.4%	346.4%
Laurel-Delmar	35.3%	210.2%	31.3%	33.3%	398.0%
Lewes	57.9%	272.1%	60.5%	2.4%	148.9%
Milford South	17.7%	204.6%	13.0%	10.8%	210.9%
Millsboro	51.6%	670.0%	50.8%	28.4%	82.6%
Milton	38.3%	82.0%	40.5%	9.3%	322.2%
Seaford	19.1%	268.1%	7.9%	33.0%	294.7%
Selbyville-Frankford	48.5%	815.7%	51.9%	-15.3%	219.0%

Source: Center for Applied Demography and Survey Research, University of Delaware  
U.S. Census Bureau

**Figure 1**



**Figure 2**

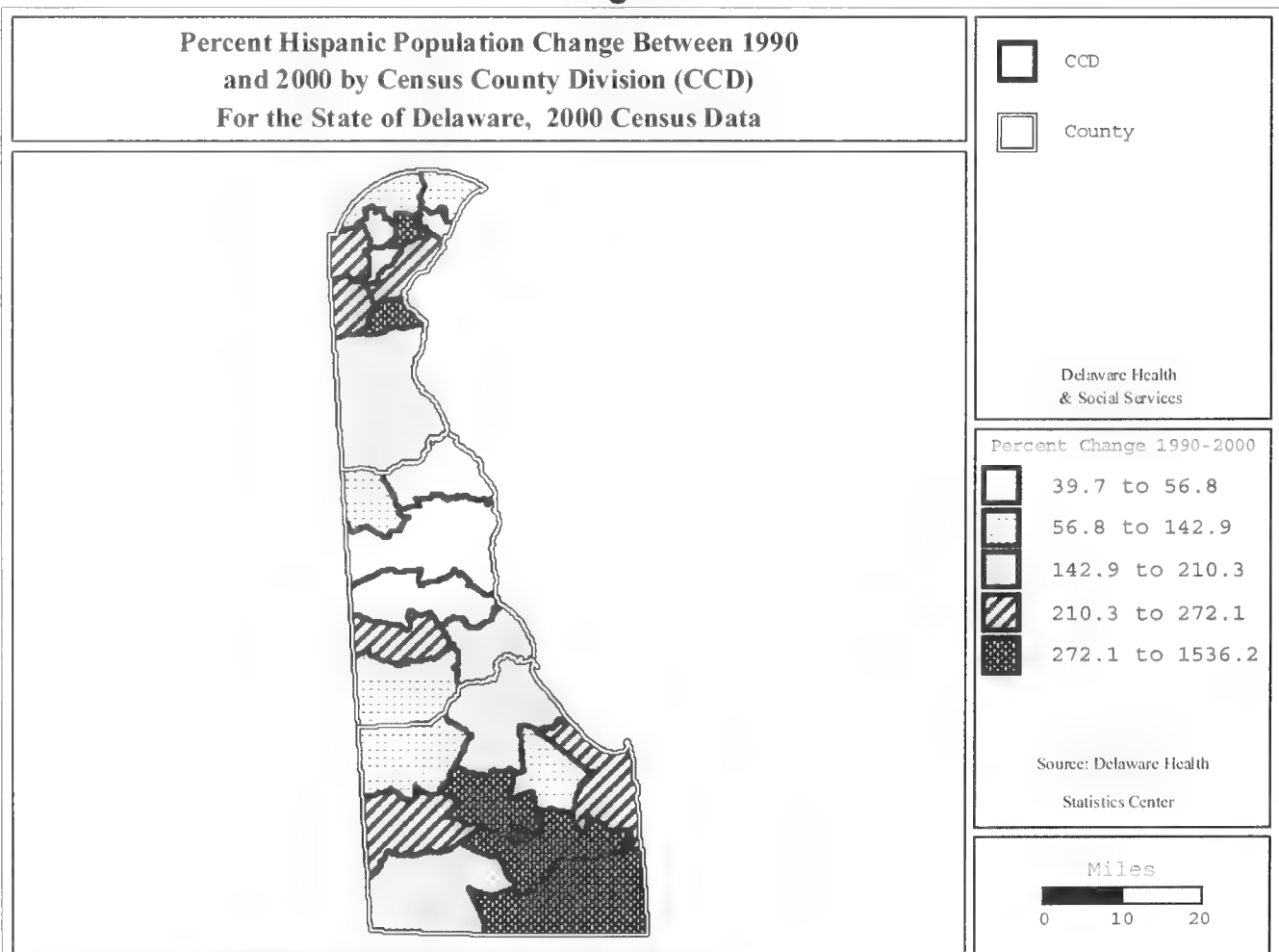


Figure 3

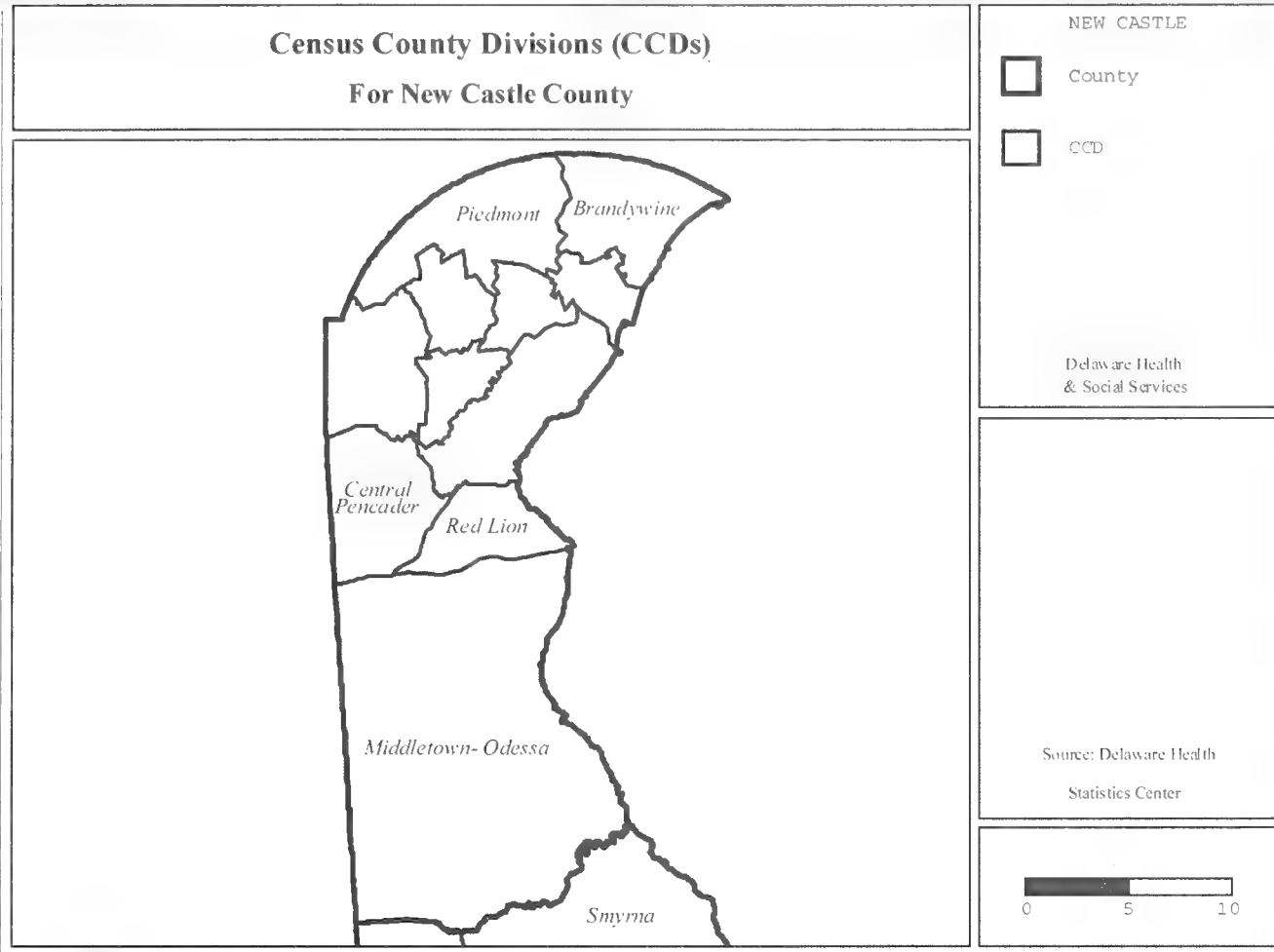


Figure 4

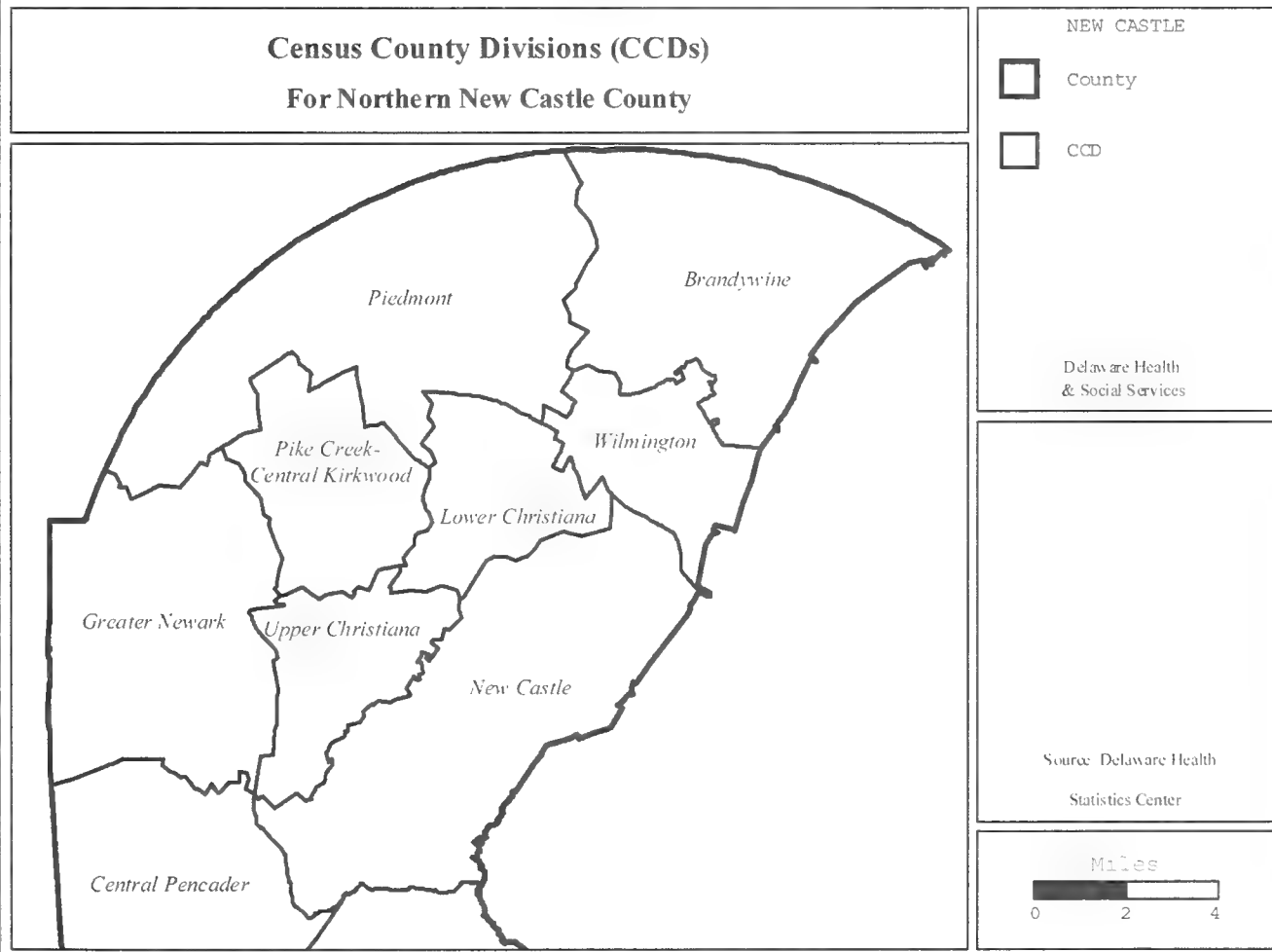


Figure 5

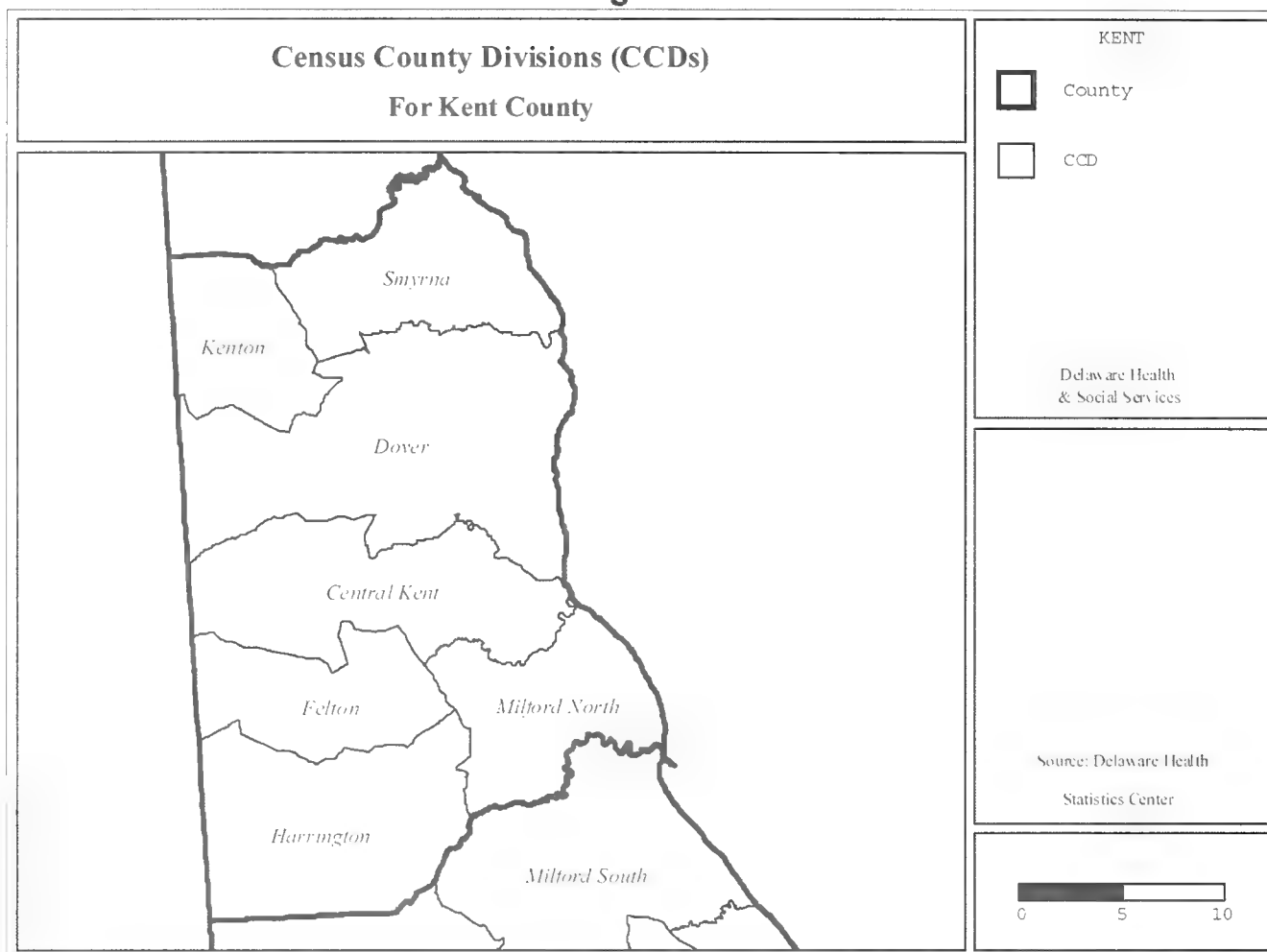
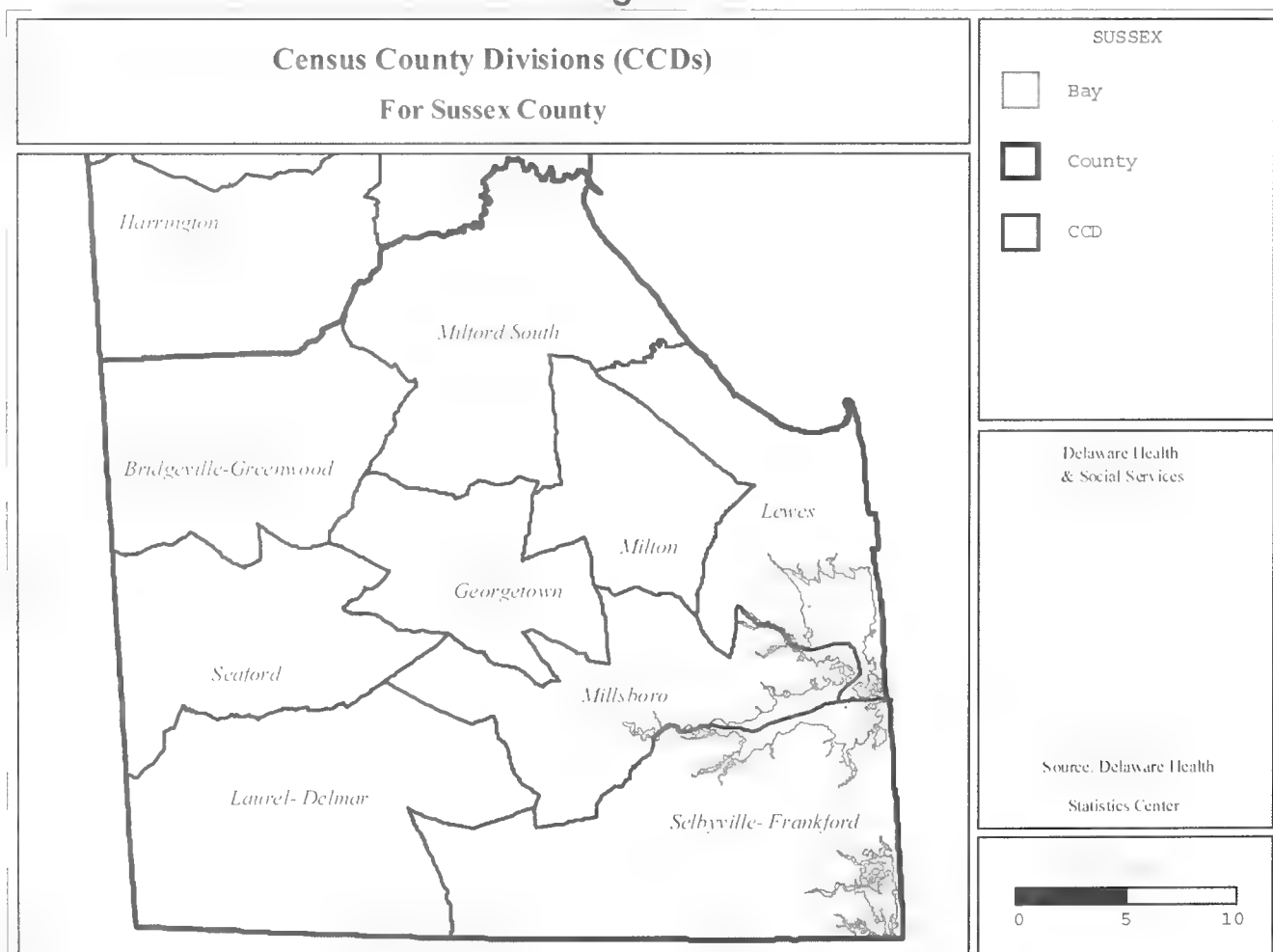


Figure 6





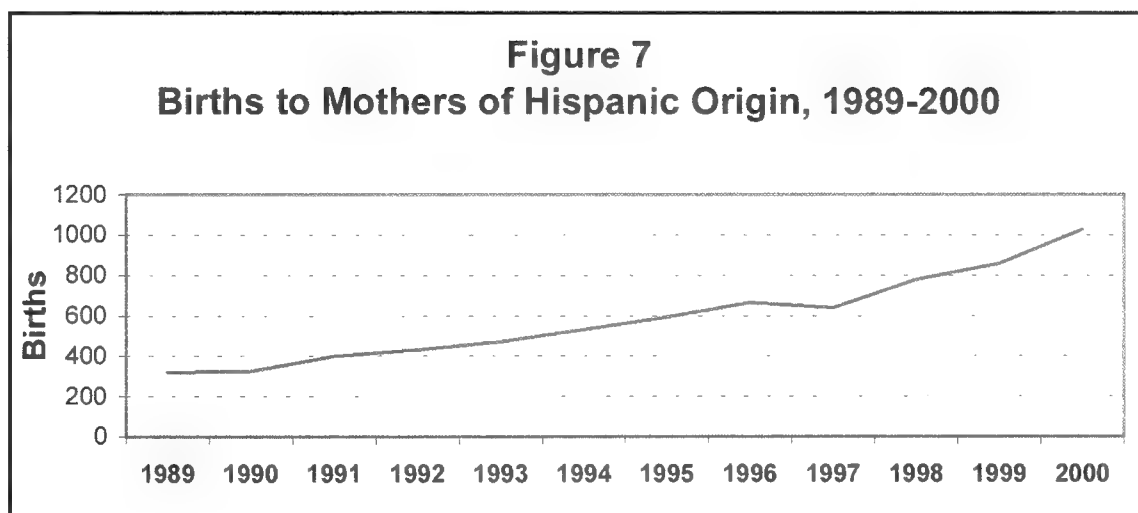
# **Birth-Related Statistics**



**Table 4**  
**Live Births by Race and Hispanic Origin of Mother, 1989-1999**

Year	Race and Hispanic Origin				
	All Births	Hispanic	White Non-Hispanic	Black Non-Hispanic	Other Non-Hispanic
1989	10,699	318	7,698	2,517	166
1990	11,118	324	8,059	2,567	168
1991	11,199	399	7,745	2,837	218
1992	10,659	429	7,515	2,499	216
1993	10,550	471	7,494	2,365	220
1994	10,390	530	7,313	2,308	239
1995	10,260	591	7,119	2,323	227
1996	10,152	665	6,902	2,350	235
1997	10,247	638	6,893	2,467	249
1998	10,574	778	6,913	2,596	287
1999	10,666	858	6,849	2,637	322

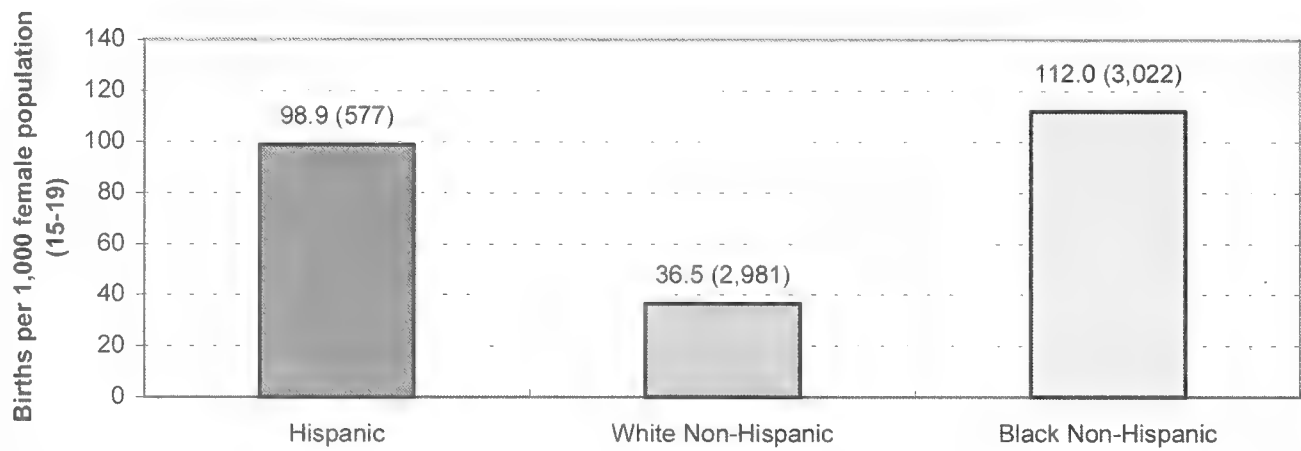
Source: Delaware Health Statistics Center



Source: Delaware Health Statistics Center

The number of births to Hispanic mothers in Delaware increased from 318 in 1989 (the first year for which Hispanic origin was collected) to 858 in 1999, an increase of 170% over the period. Preliminary estimates suggest that there were over 1,000 births to Hispanic mothers in 2000.<sup>[4]</sup> (Note: Trend data regarding the number of births to Hispanic mothers are available by county and the City of Wilmington in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>

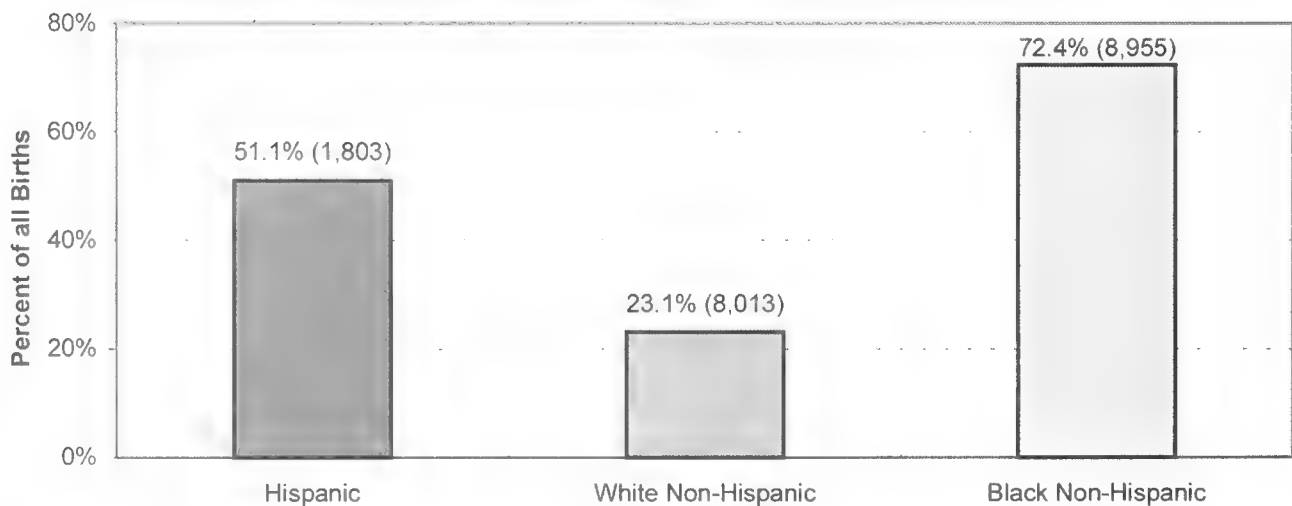
**Figure 8**  
**Teen Birth Rates (15-19), 1994-1998**



Source: Delaware Health Statistics Center

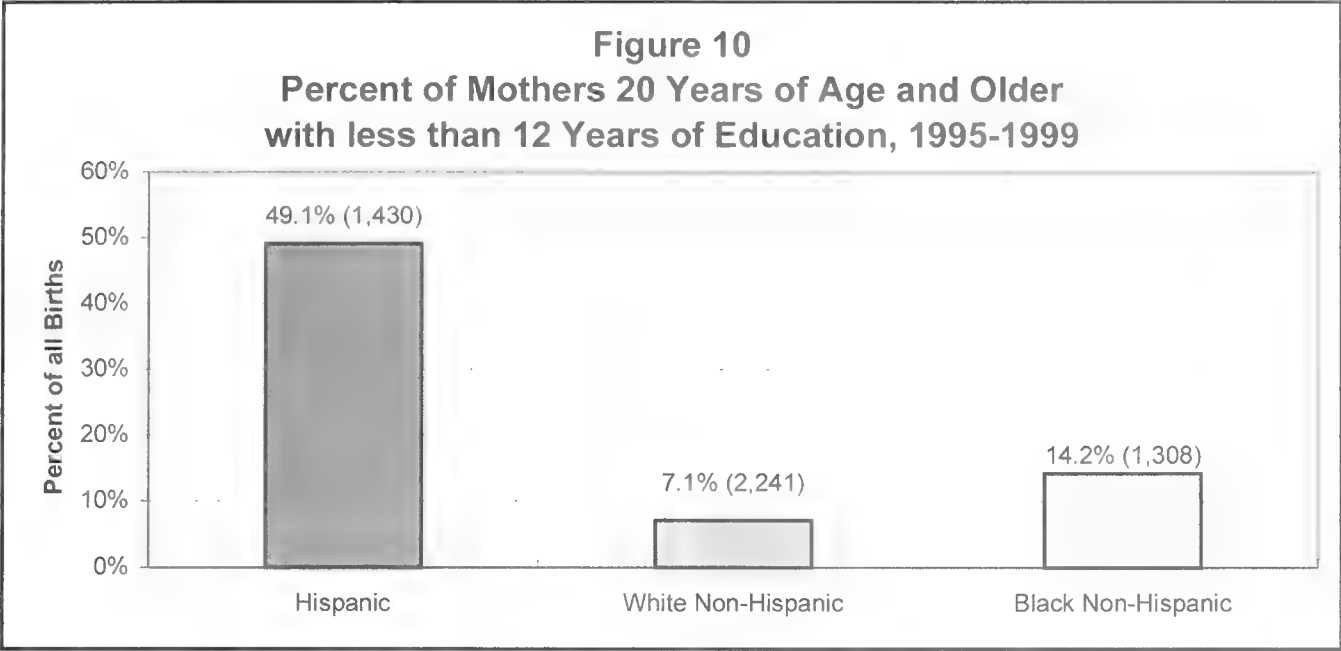
Teen birth rates for Hispanic and Black non-Hispanic mothers in Delaware were much higher than rates for White non-Hispanic mothers. The vast majority of these teen mothers were single (i.e., unmarried) regardless of their racial or ethnic group (Hispanics – 80.4%, White non-Hispanics – 81.8%, and Black non-Hispanics – 97.9%). In contrast to Delaware, national data indicate that Hispanics had a higher teen birth rate (93.4) than both White non-Hispanics (34.0) and Black non-Hispanics (83.7) in 1999.<sup>[16]</sup>

**Figure 9**  
**Percent of Births to Single Mothers, 1995-1999**



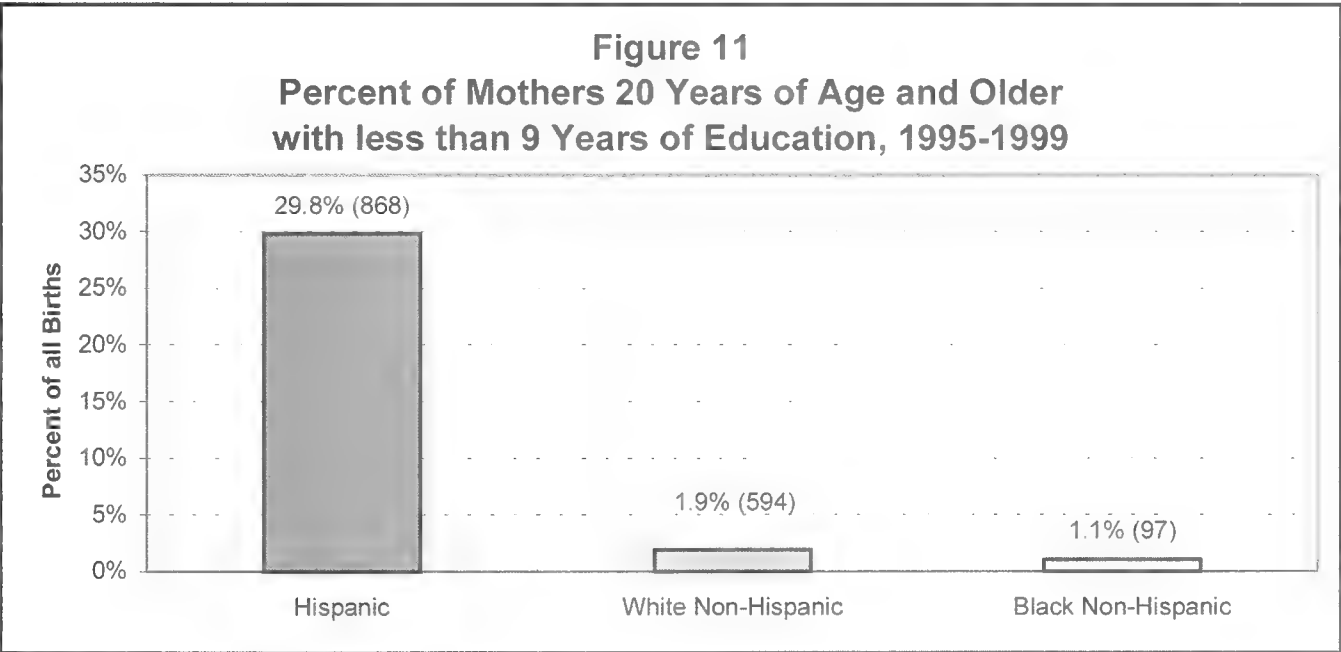
Source: Delaware Health Statistics Center

Births to single (i.e., unmarried) mothers have been rising in Delaware and the U.S. for a number of years.<sup>[3]</sup> Over 51% of Hispanic mothers who gave birth from 1995-1999 were single. This percent was over twice as high as the percent for White non-Hispanics, but was lower than the percent for Black non-Hispanics. U.S. data for 1999 indicate that 42.2% of all Hispanic births were to single mothers compared with 69.1% and 22.1% for Black and White non-Hispanic mothers, respectively.<sup>[16]</sup> (Note: Trend data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



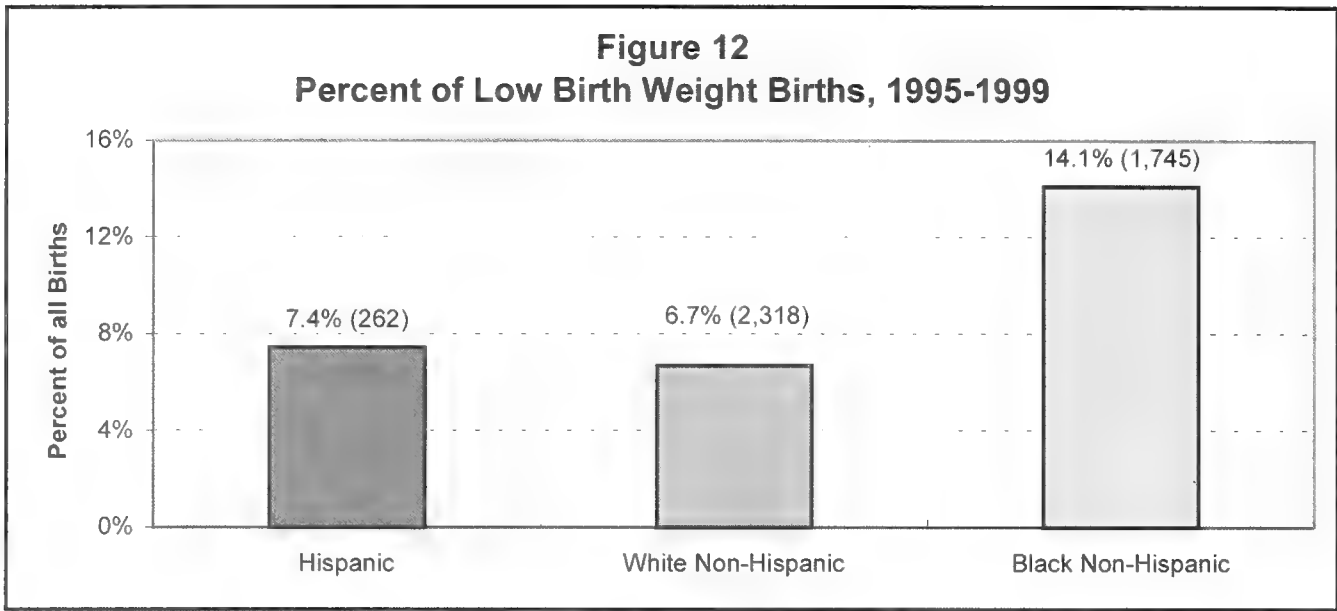
Source: Delaware Health Statistics Center

Delaware’s Hispanic mothers 20 years of age and older who gave birth in 1995-1999 were much more likely to have less than 12 years of education than either White non-Hispanic or Black non-Hispanic mothers. National data from 1999 shows a similar pattern with 43.4% of Hispanic mothers having less than 12 years of education compared to 8.1% for White non-Hispanics and 16.3% for Black non-Hispanics.<sup>[16]</sup> (Note: More detailed data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



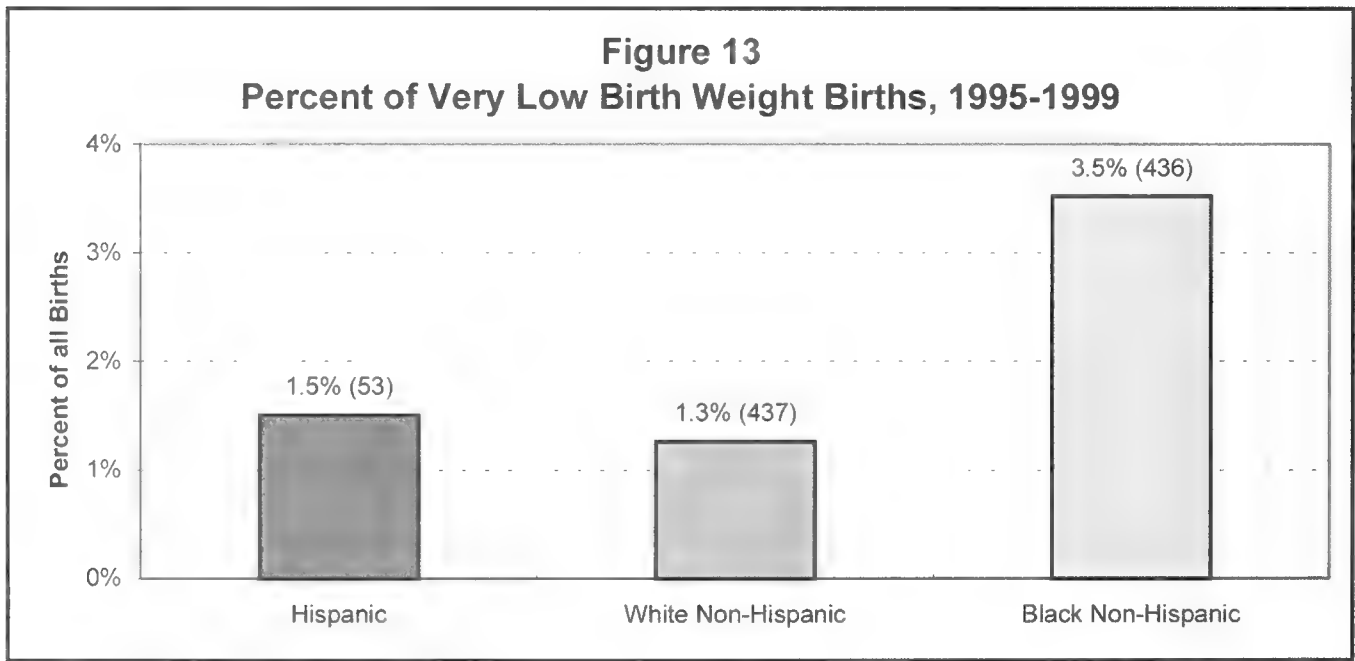
Source: Delaware Health Statistics Center

Delaware’s Hispanic mothers 20 years of age and older who gave birth in 1995-1999 were much more likely to have less than 9 years of education than either White non-Hispanic or Black non-Hispanic mothers. National data from 1999 shows a similar pattern with 21.2% of Hispanic mothers having less than 9 years of education compared to 1.3% for both White and Black non-Hispanics.<sup>[16]</sup> (Note: More detailed data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



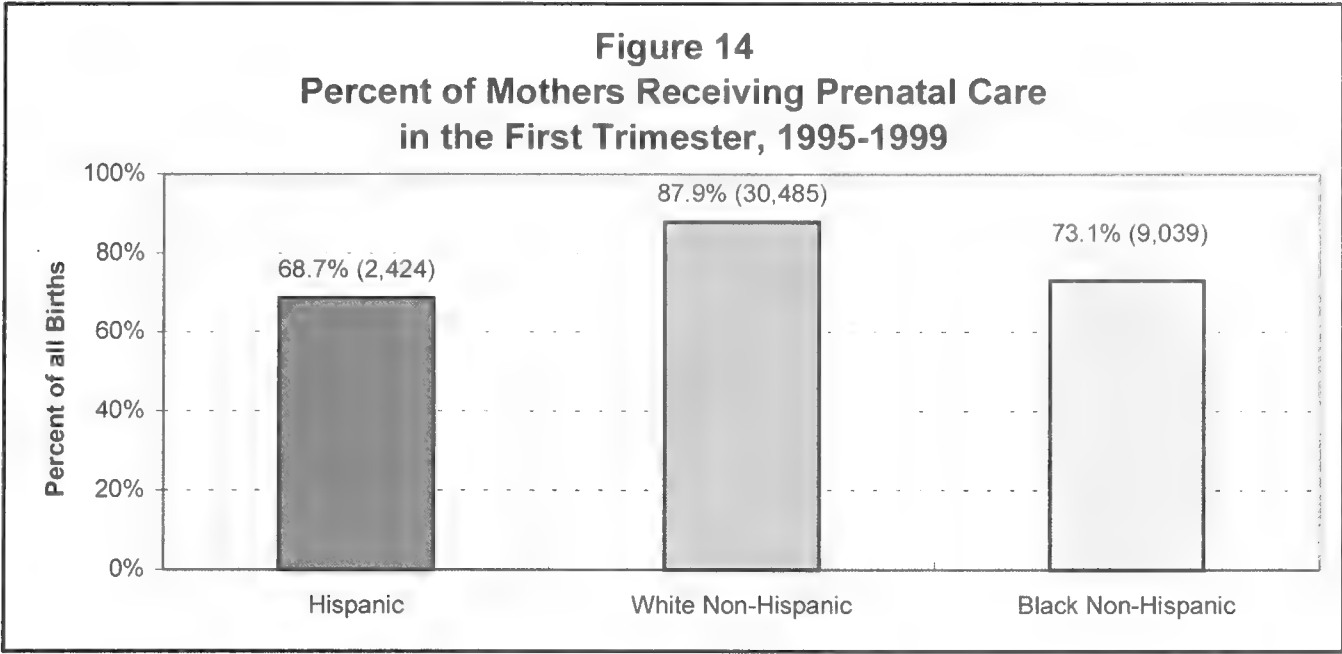
Source: Delaware Health Statistics Center

Hispanic newborns in Delaware were slightly more likely to be low birth weight (<2500 grams or 5 lbs 8 oz) than White non-Hispanic infants. Black non-Hispanics had a rate that was about twice as high as the other two groups. Nationally, percentages for Hispanics and White non-Hispanics were similar (6.4% and 6.6%, respectively) in 1999 with the rate for Black non-Hispanics being about twice as high (13.2%).<sup>[16]</sup> (Note: Trend data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



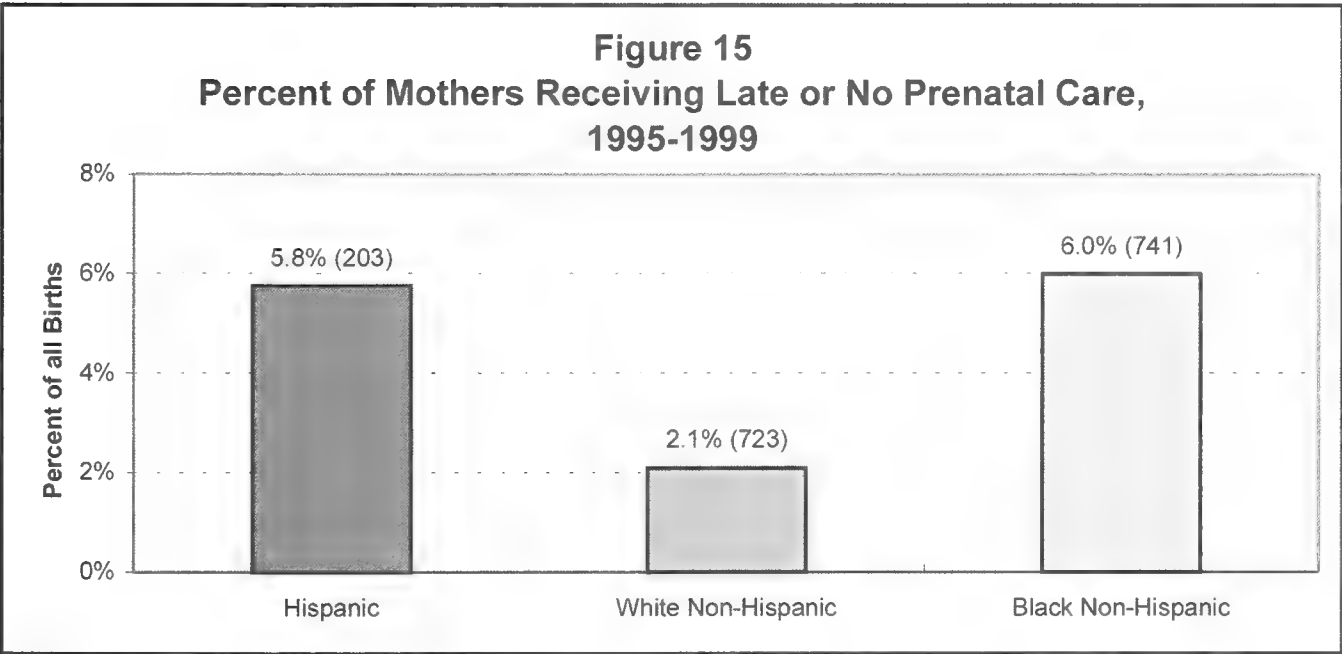
Source: Delaware Health Statistics Center

As with low birth weight, Hispanic newborns in Delaware were slightly more likely to be very low birth weight (<1500 grams or 3 lbs 5 oz) than White non-Hispanic infants. Black non-Hispanics had a rate that was more than twice as high as the other two groups. U.S. data from 1999 indicates that the percentages for Hispanics and White non-Hispanics were nearly identical at 1.1% and 1.2%, respectively. The national rate for Black non-Hispanics was 3.2%.<sup>[16]</sup> (Note: Trend data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



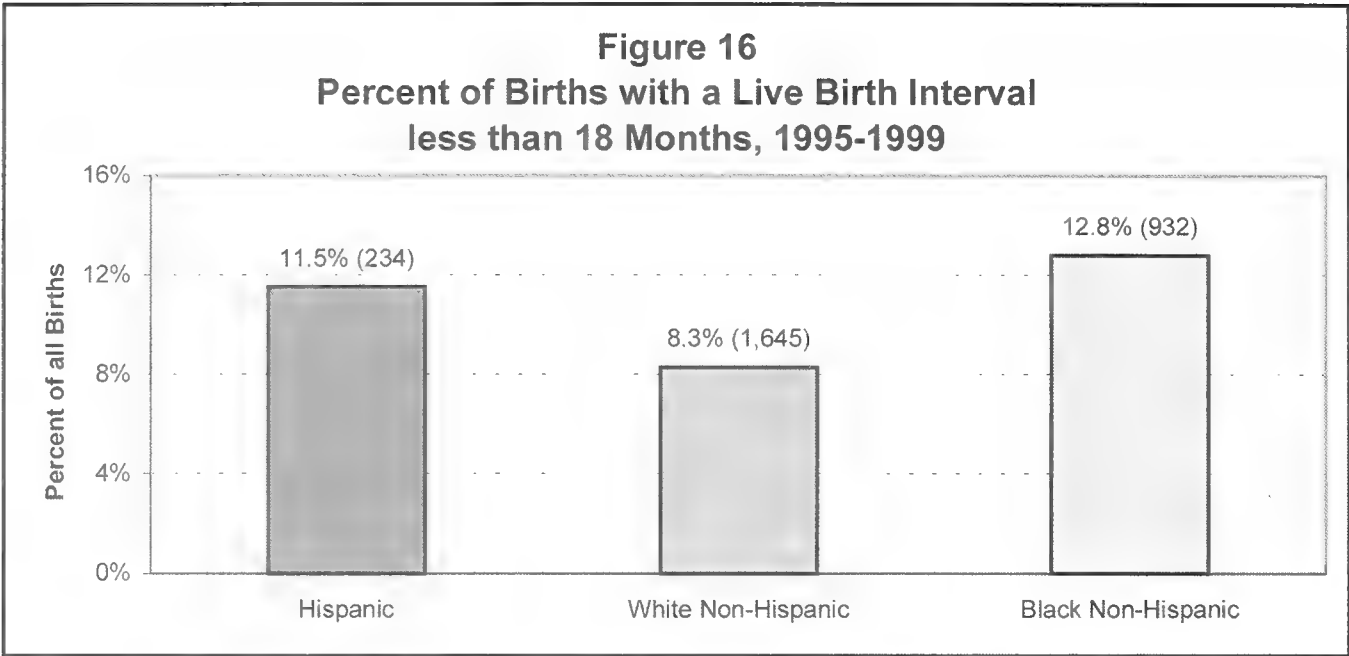
Source: Delaware Health Statistics Center

In Delaware, Hispanic mothers were the least likely to receive prenatal care during the first trimester of pregnancy. Nationally, about 74.4% of Hispanic mothers had their first visit in the first trimester in 1999. This percent was slightly higher than the percent for Black non-Hispanics (74.1%) but was considerably lower than for White non-Hispanics (88.4%).<sup>[16]</sup> (Note: Trend data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



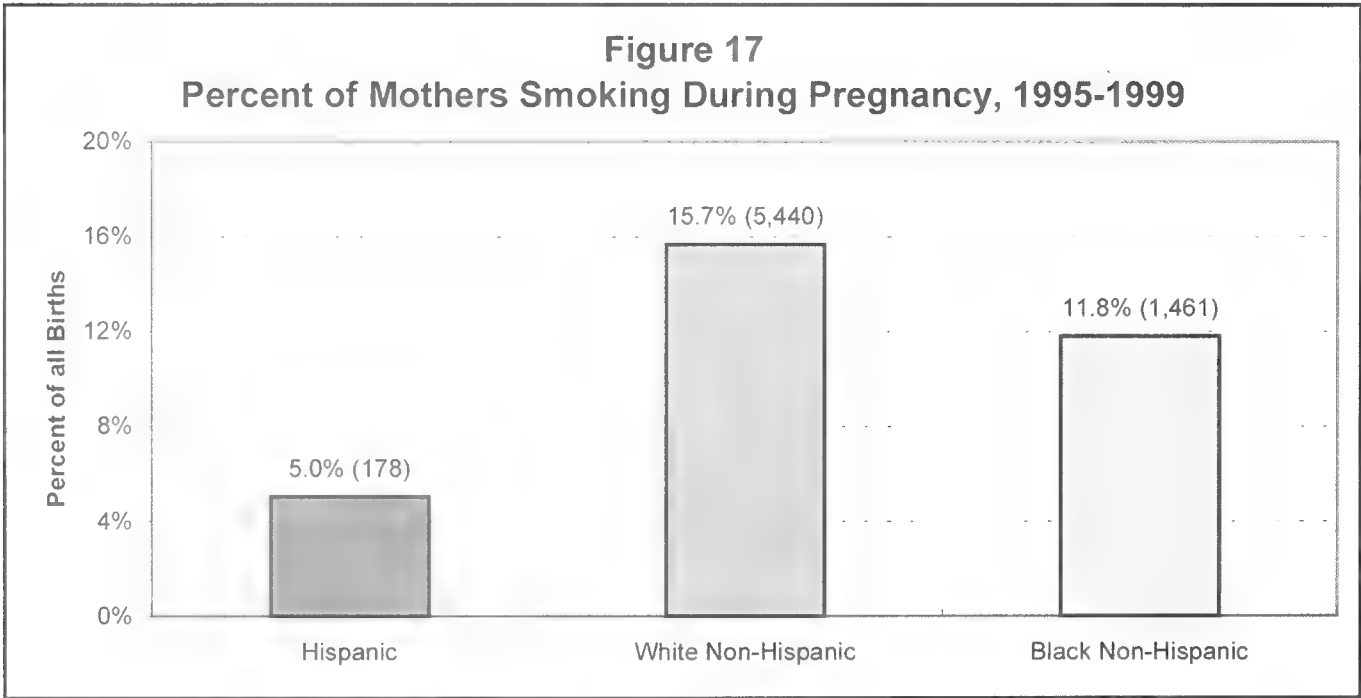
Source: Delaware Health Statistics Center

Hispanics and Black non-Hispanics in Delaware had a similar percent of mothers receiving late (third trimester) or no prenatal care. In 1999, 6.0% of Hispanic mothers in the U.S. received late or no prenatal care compared with 6.3% for Black non-Hispanic mothers and 2.2% of White non-Hispanic mothers.<sup>[16]</sup> (Note: More detailed data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



Source: Delaware Health Statistics Center

Closely spaced births (i.e., a live birth interval of less than 18 months) was identified as a contributing factor to excess infant mortality in the state by the Delaware Perinatal Board.<sup>[5]</sup> Both Hispanic mothers and Black non-Hispanic mothers were more likely to have closely spaced births than White non-Hispanic mothers. Comparable national data are not available. (Note: More detailed data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>

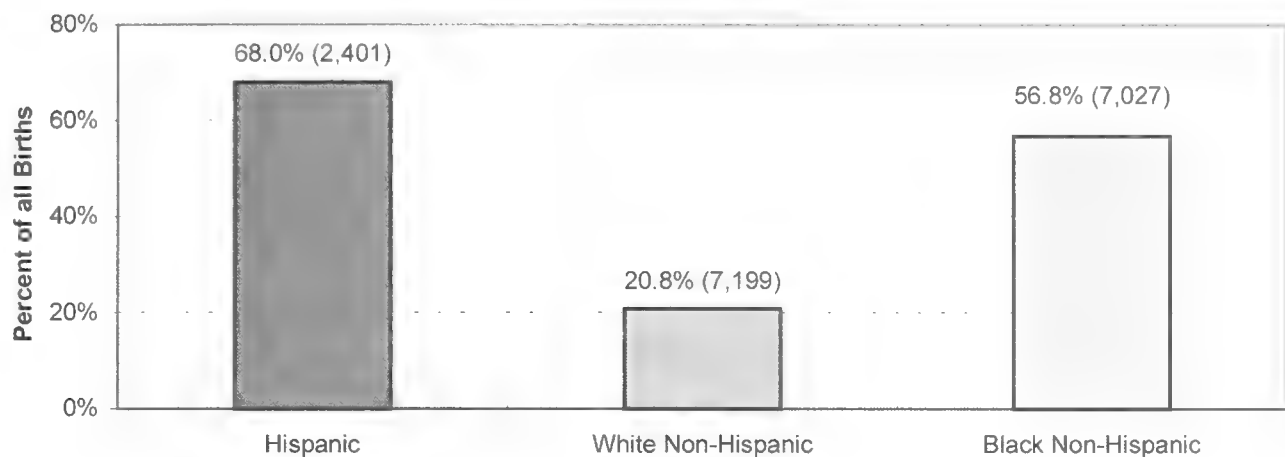


Source: Delaware Health Statistics Center

The smoking rate during pregnancy in Delaware was lowest among Hispanic mothers and highest among White non-Hispanic mothers. National data for 1999 show a similar pattern with smoking rates of 3.7% for Hispanic mothers, 15.9% for White non-Hispanic mothers, and 9.4% for Black non-Hispanic mothers.<sup>[16]</sup> (Note: State-level trend data for Hispanics and more detailed data by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



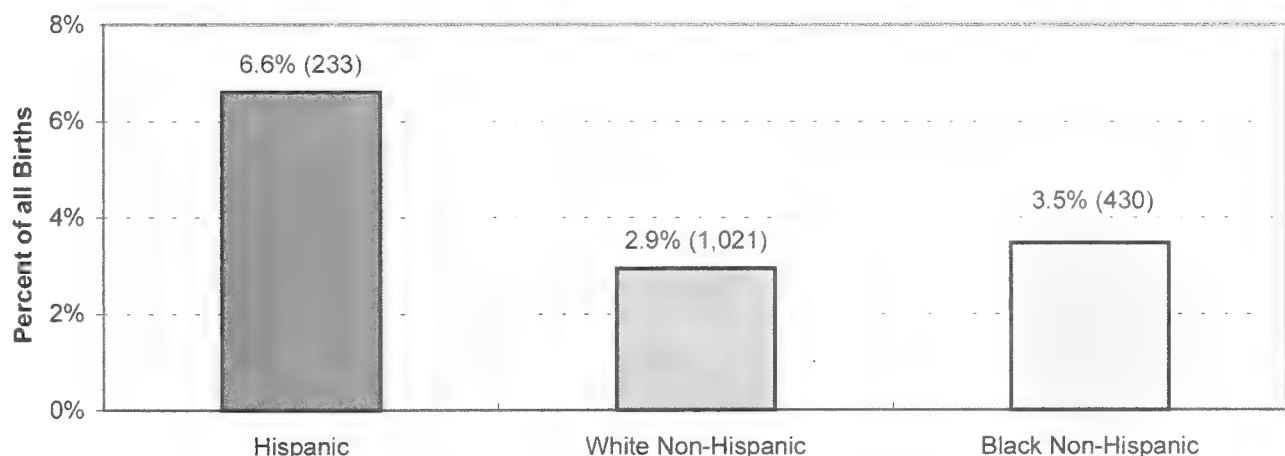
**Figure 18**  
**Percent of Mothers with Medicaid as Source of Payment**  
**for Delivery, 1995-1999**



Source: Delaware Health Statistics Center

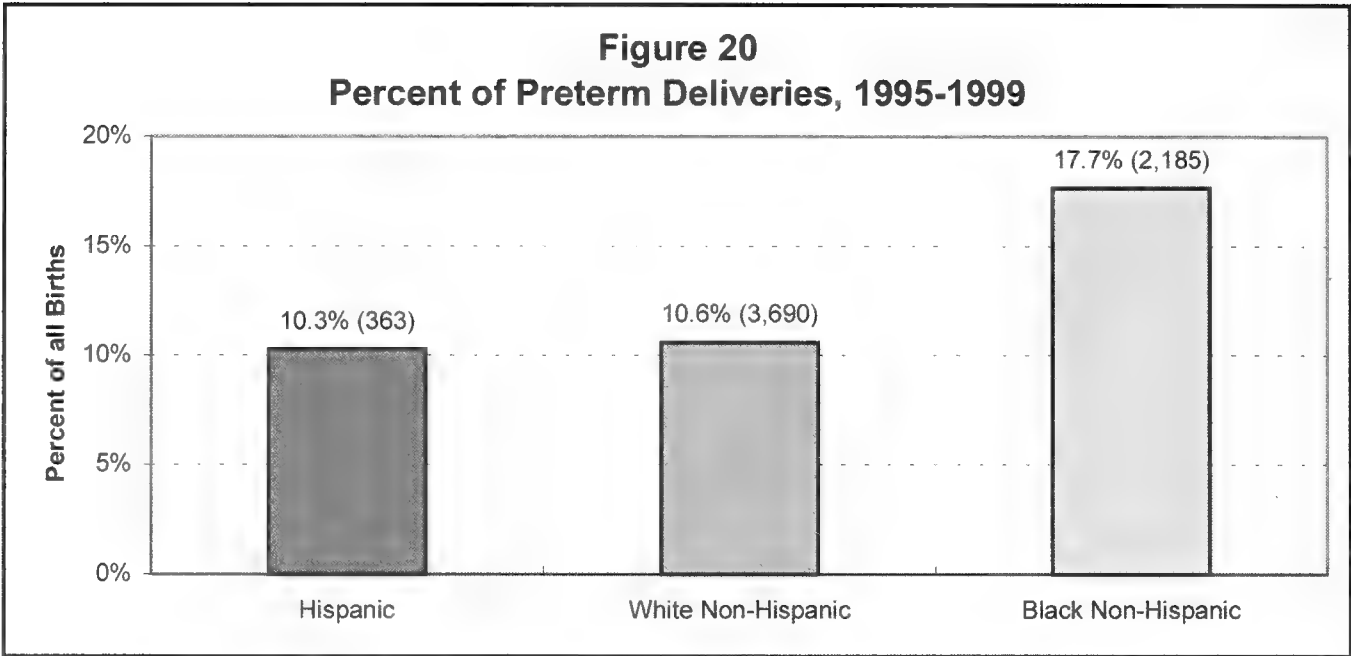
In Delaware, Hispanic mothers had the highest percent of Medicaid deliveries among the three groups. The percents for both Hispanics and Black non-Hispanics were considerably higher than for White non-Hispanics. Comparable national data are not available. (Note: More detailed data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>

**Figure 19**  
**Percent of Mothers with Self Pay as Source of Payment**  
**for Delivery, 1995-1999**



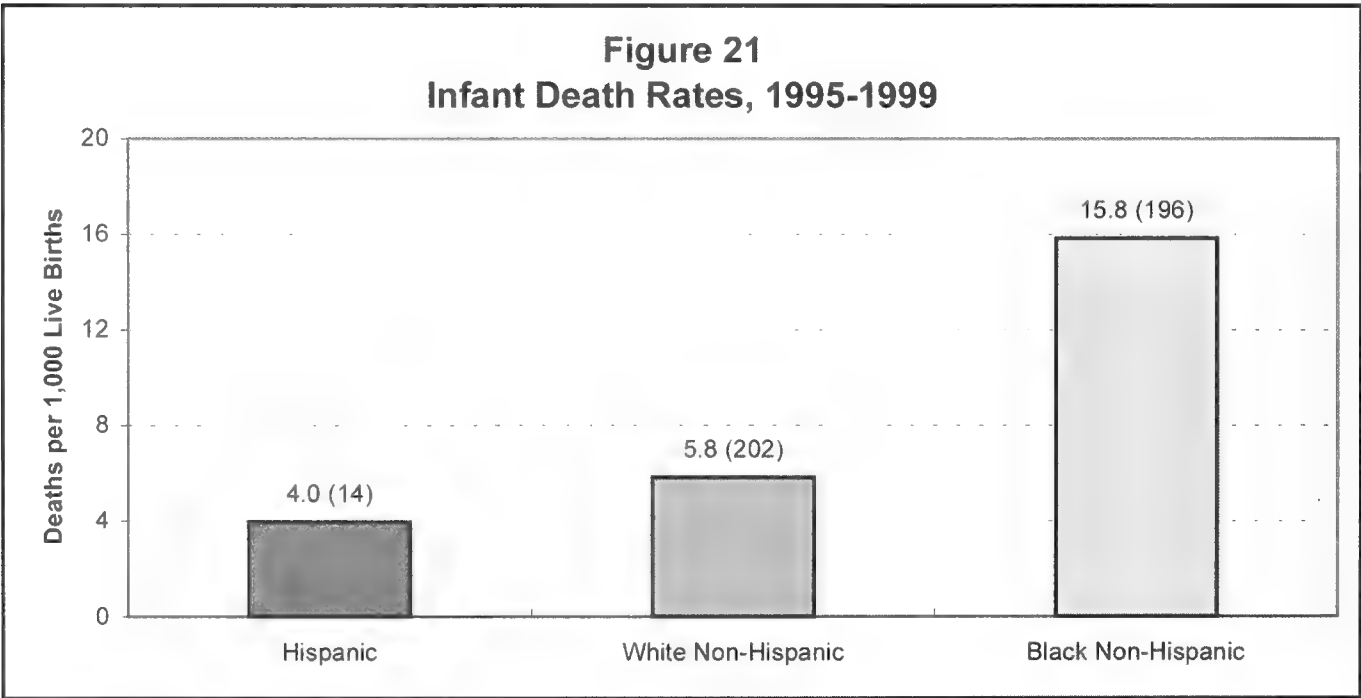
Source: Delaware Health Statistics Center

In Delaware, Hispanic mothers had the highest percent of self pay deliveries. Self pay is generally regarded as an indicator of lack of insurance coverage. Comparable national data are not available. (Note: More detailed data for Hispanics by county and the City of Wilmington are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



Source: Delaware Health Statistics Center

The percent of deliveries in Delaware that were preterm (<37 weeks of gestation) was nearly identical for Hispanic and White non-Hispanic newborns with both groups being considerably lower than the percent for Black non-Hispanics. Nationally, the 1999 percent for Hispanics (11.4%) was higher than for White non-Hispanics (10.5%). The U.S. percent for Black non-Hispanics was 17.6%.<sup>[16]</sup> (Note: More detailed data for Hispanics by age and birth weight are available for this indicator in the *Delaware Vital Statistics Annual Report, 1999*).<sup>[3]</sup>



Source: Delaware Health Statistics Center

Due to the small number of infant deaths (deaths occurring before the child's first birthday) to Hispanic children, this rate should be interpreted with caution. The infant death rate for Hispanic children was lower than for White non-Hispanic and Black non-Hispanic children. National data for 1995-1997 showed equal rates for Hispanics and White non-Hispanics (6.1). The U.S. rate for Black non-Hispanics was 14.2.<sup>[12]</sup> (Note: State-level trend data for Hispanics are available for this indicator in the *KIDS COUNT in Delaware Fact Book, 2000-2001*).<sup>[9]</sup>

# Death Statistics



**Table 5**  
**Ten Leading Causes of Death by Race and Hispanic Origin, 1994-1998**

Hispanic			White Non-Hispanic		
Rank	Cause of death	Deaths	Rank	Cause of death	Deaths
1	Cancer	61	1	Heart Disease	8,420
2	Heart Disease	60	2	Cancer	6,834
3	Unintentional Injury	57	3	Stroke	1,421
4	AIDS	23	4	Chronic obstructive lung disease	1,283
5	Stroke	12	5	Unintentional Injury	1,039
6	Diabetes	11	6	Pneumonia and Influenza	933
7	Pneumonia and Influenza	9	7	Diabetes	728
8	Liver disease & Cirrhosis	8	8	Septicemia	400
9	Chronic obstructive lung disease	7	9	Suicide	367
10*	Septicemia	4	10	Kidney disease	340
10*	Diseases of early infancy	4		All Other Diseases	4,533
10*	Suicide	4		All Causes	26,298
	All Other Diseases	52			
	All Causes	312			

Black Non-Hispanic			Other Non-Hispanic		
Rank	Cause of death	Deaths	Rank	Cause of death	Deaths
1	Heart Disease	1,355	1	Heart Disease	61
2	Cancer	1,320	2	Cancer	43
3	AIDS	370	3	Stroke	16
4	Stroke	299	4	Unintentional Injury	14
5	Unintentional Injury	254	5	Diabetes	9
6	Diabetes	240	6	Suicide	7
7	Pneumonia and Influenza	138	7	Pneumonia and Influenza	6
8	Chronic obstructive lung disease	135	8	Diseases of early infancy	6
9	Diseases of early infancy	110	9	Liver disease & Cirrhosis	4
10	Kidney disease	107	10*	Septicemia	3
	All Other Diseases	1,066	10*	Chronic obstructive lung disease	3
	All Causes	5,394		All Other Diseases	35
				All Causes	207

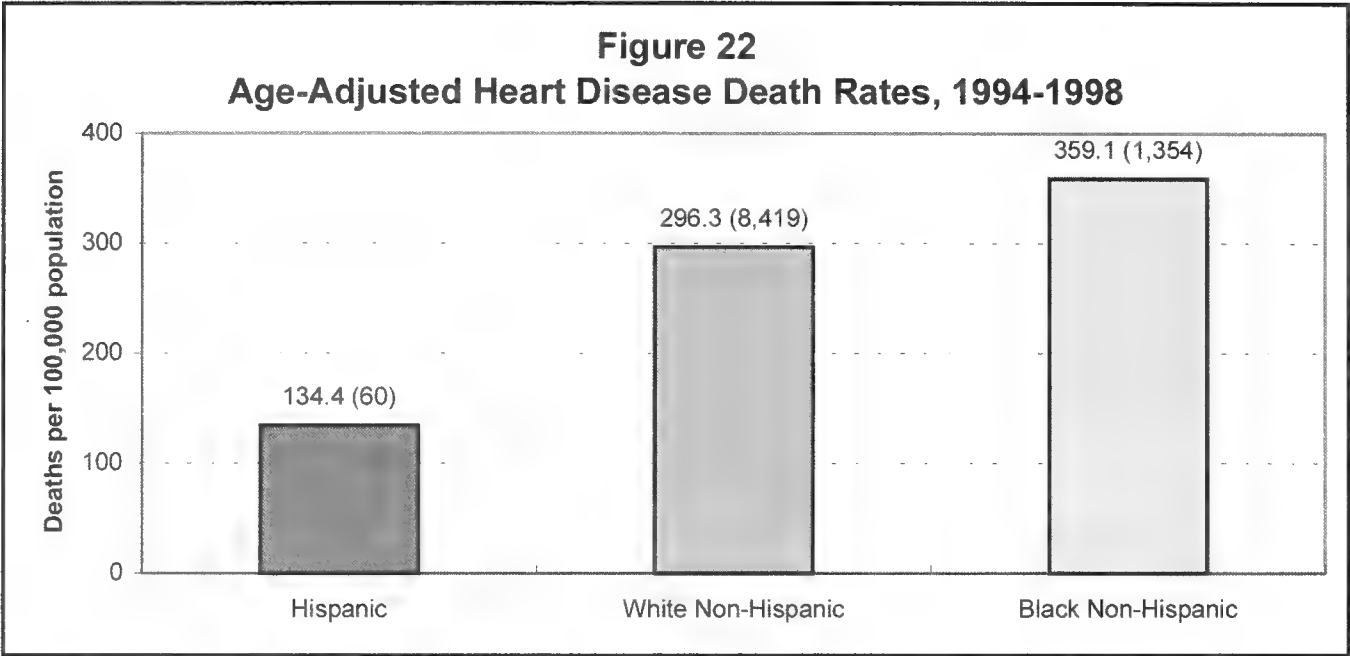
Source: Delaware Health Statistics Center

\* Indicates a tied rank.

There were 32,211 deaths to Delaware residents from 1994-1998 with 312 deaths to Hispanics.

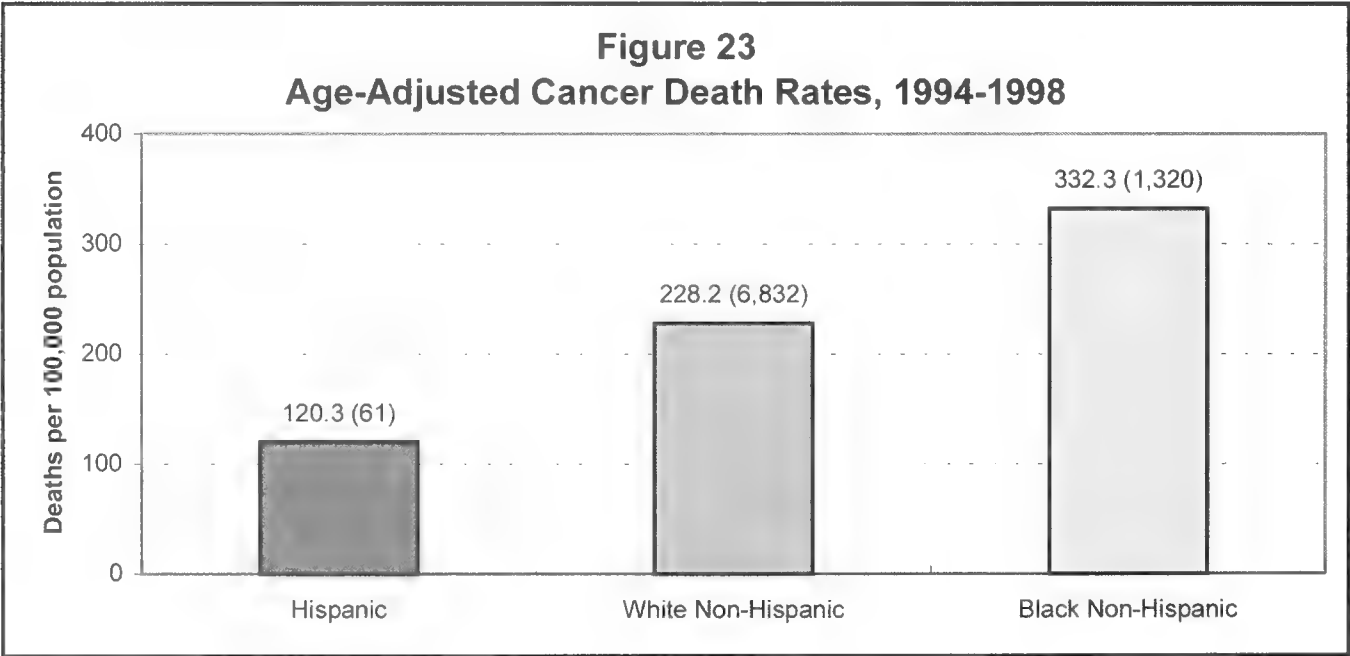
*Heart Disease* and *Cancer* were the top two causes for all groups in Delaware with *Cancer* slightly beating out *Heart Disease* for number one among Hispanics.

*AIDS* was the fourth leading cause of death for Hispanics and the third leading cause for Black non-Hispanics during the period. *AIDS* did not appear among the 10 leading causes for White non-Hispanics. Nationally, *AIDS* was the fifth leading cause among Hispanics in 1996, the tenth leading cause in 1997, and did not appear among the top 10 in 1998.<sup>[8,11,13]</sup>



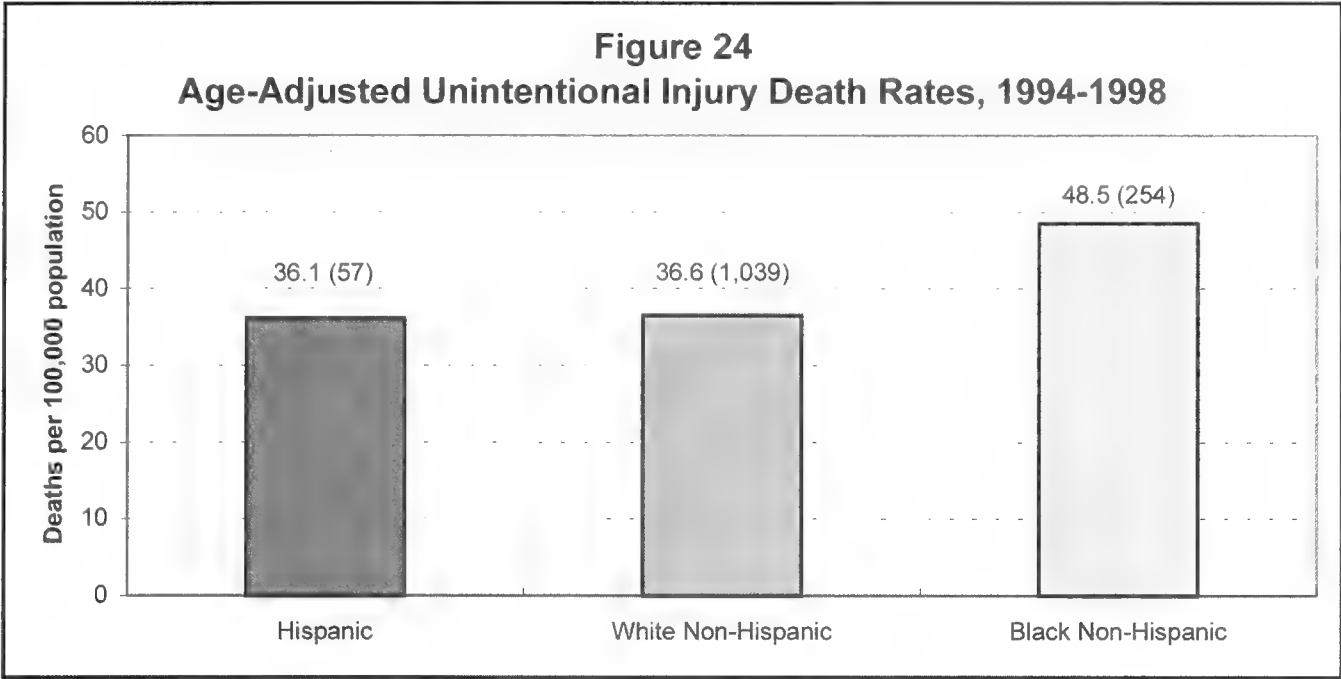
Source: Delaware Health Statistics Center

The *Heart Disease* death rate in Delaware was lower for Hispanics than for either White non-Hispanics or Black non-Hispanics. National data from 1998 indicate that the U.S. *Heart Disease* death rate is also considerably lower for Hispanics.<sup>[12]</sup>



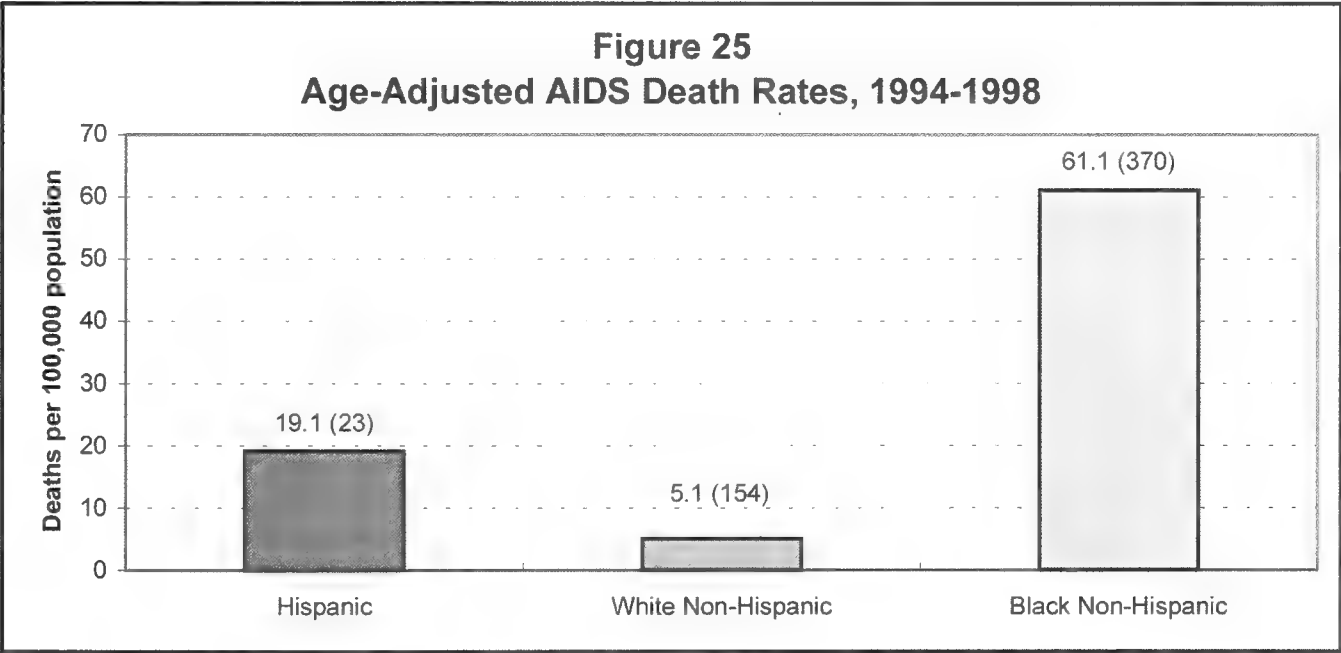
Source: Delaware Health Statistics Center

The *Cancer* death rate in Delaware was lower for Hispanics than for either White non-Hispanics or Black non-Hispanics. National data from 1998 indicate that the U.S. *Cancer* death rate is also considerably lower for Hispanics.<sup>[12]</sup>



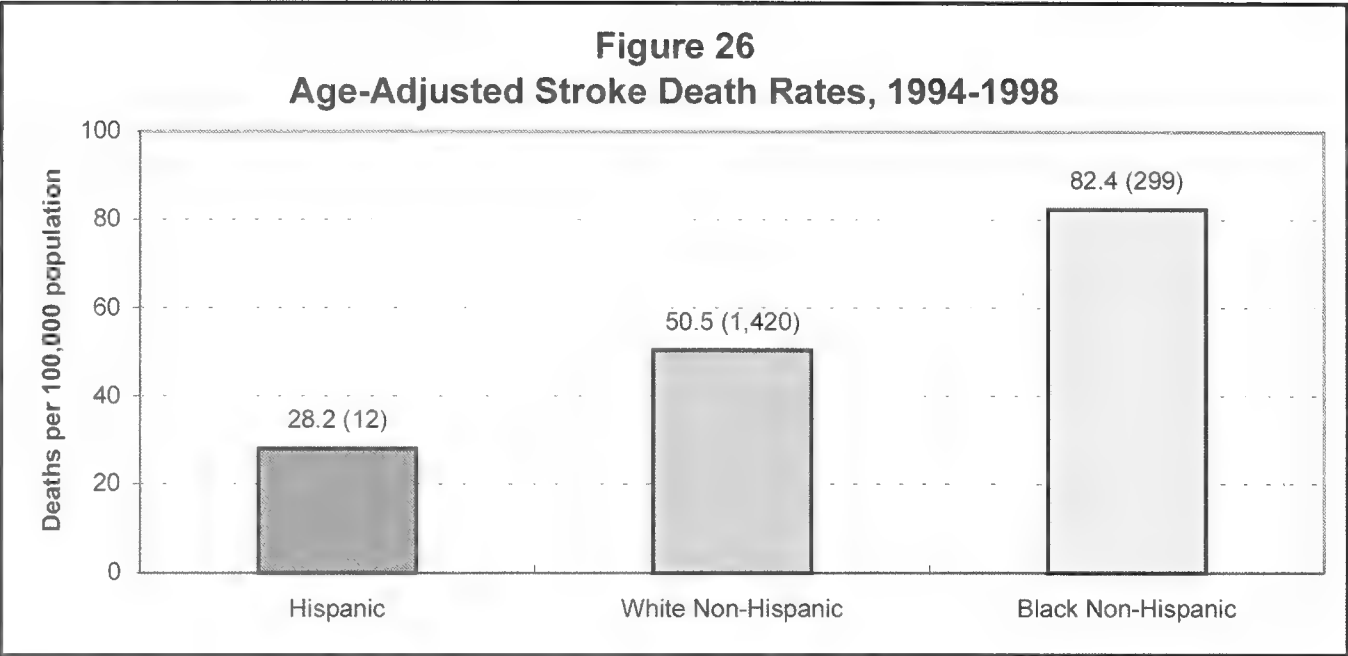
Source: Delaware Health Statistics Center

The *Unintentional Injury* death rate in Delaware was nearly the same for Hispanics and White non-Hispanics. However, both groups had rates lower than for Black non-Hispanics. Nationally, the *Unintentional Injury* death rate for Hispanics was slightly lower than for White non-Hispanics in 1998.<sup>[12]</sup> As in Delaware, both groups had lower rates than Blacks.



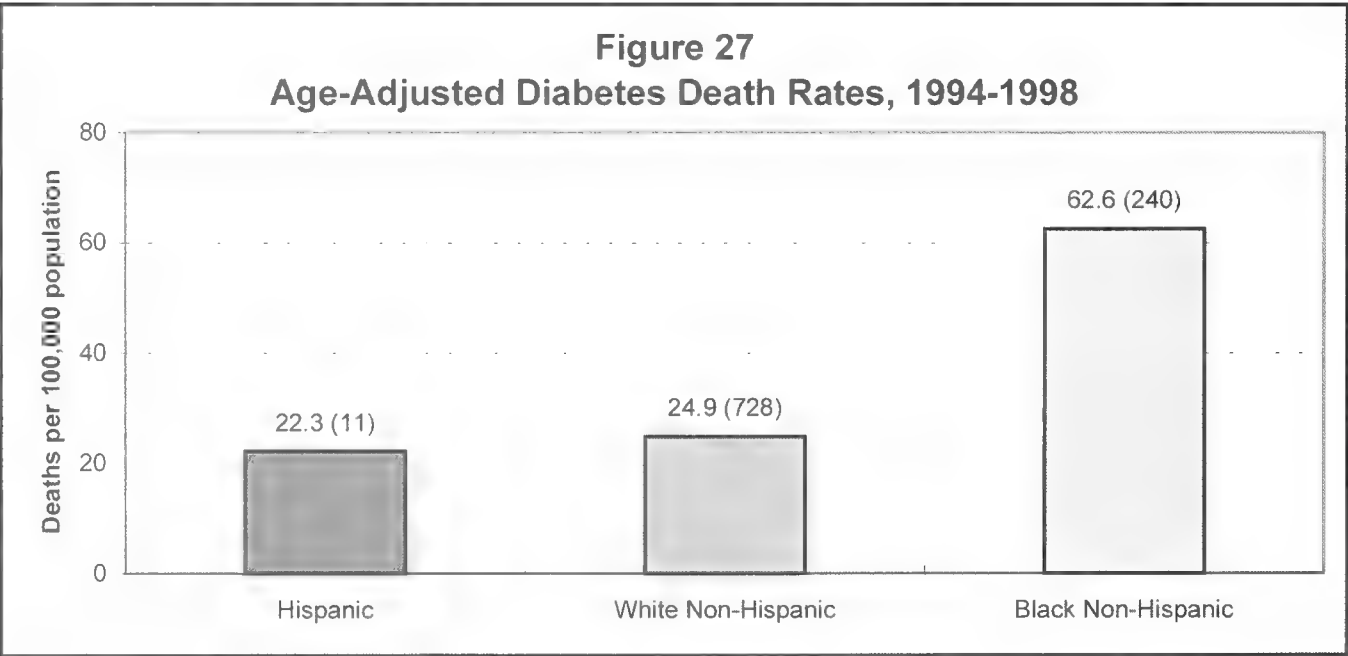
Source: Delaware Health Statistics Center

The *AIDS* death rate in Delaware was 3.7 times higher for Hispanics than for White non-Hispanics. The highest rate for AIDS deaths was among Black non-Hispanics. Nationally, the *AIDS* death rate for Hispanics was about 3.1 times higher than for White non-Hispanics in 1998.<sup>[12]</sup> As in Delaware, both groups had lower rates than Blacks.



Source: Delaware Health Statistics Center

Due to the small number of *Stroke* deaths among Hispanic Delawareans from 1994-1998, rates for this cause should be interpreted with caution. With that caveat in mind, the *Stroke* death rate in Delaware was lower for Hispanics than for White non-Hispanics or Black non-Hispanics. Data from the National Center for Health Statistics from 1998 indicate that the U.S. *Stroke* death rate was also lower for Hispanics.<sup>[12]</sup>



Source: Delaware Health Statistics Center

Due to the small number of *Diabetes* deaths among Hispanic Delawareans from 1994-1998, rates for this cause should be interpreted with caution. With that caveat in mind, the *Diabetes* death rate in Delaware was slightly lower for Hispanics than for White non-Hispanics and was considerably lower than the rate for Black non-Hispanics. In contrast to the Delaware data, national numbers from 1998 indicate that U.S. *Diabetes* death rates are higher for Hispanics than White non-Hispanics.<sup>[12]</sup> It is worth noting that although the *Diabetes* death rate is not higher for Hispanics in Delaware, the inpatient hospitalization rate is about 1.7 times higher than for White non-Hispanics (see page 35).



# **Preventable Hospitalization Statistics**



Table 6

## Ten Leading Preventable Hospitalizations by Race and Hispanic Origin, 1994-1998

Hispanic			White Non-Hispanic		
Rank	Reason for Hospitalization	Discharges	Rank	Reason for Hospitalization	Discharges
1	Asthma	350	1	Congestive Heart Failure	9,532
2	Bacterial Pneumonia	264	2	Bacterial Pneumonia	8,412
3	Diabetes	147	3	COPD <sup>†</sup>	5,449
4	Dehydration – Volume Depletion	145	4	Dehydration – Volume Depletion	4,237
5	Kidney/Urinary Infection	94	5	Asthma	3,304
6	Congestive Heart Failure	91	6	Kidney/Urinary Infection	3,074
7	Cellulitis	71	7	Diabetes	2,382
8	Convulsions	57	8	Angina	2,295
9	COPD <sup>†</sup>	41	9	Cellulitis	2,126
10	Gastroenteritis	37	10	Convulsions	1,285
	All other preventable hospitalizations	160		All other preventable hospitalizations	3,539
	All preventable hospitalizations	1,457		All preventable hospitalizations	45,635

Black Non-Hispanic			Other Non-Hispanic		
Rank	Reason for Hospitalization	Discharges	Rank	Reason for Hospitalization	Discharges
1	Congestive Heart Failure	2,812	1*	Bacterial Pneumonia	72
2	Bacterial Pneumonia	2,414	1*	Congestive Heart Failure	72
3	Asthma	2,346	3	Asthma	67
4	Diabetes	1,639	4	Dehydration – Volume Depletion	51
5	Dehydration – Volume Depletion	1,062	5	Diabetes	41
6	COPD <sup>†</sup>	960	6	Kidney/Urinary Infection	40
7	Kidney/Urinary Infection	773	7	COPD <sup>†</sup>	24
8	Convulsions	704	8*	Cellulitis	19
9	Cellulitis	517	8*	Convulsions	19
10	Angina	434	10	Angina	17
	All other preventable hospitalizations	1,715		All other preventable hospitalizations	54
	All preventable hospitalizations	15,376		All preventable hospitalizations	476

Source: Delaware Health Statistics Center

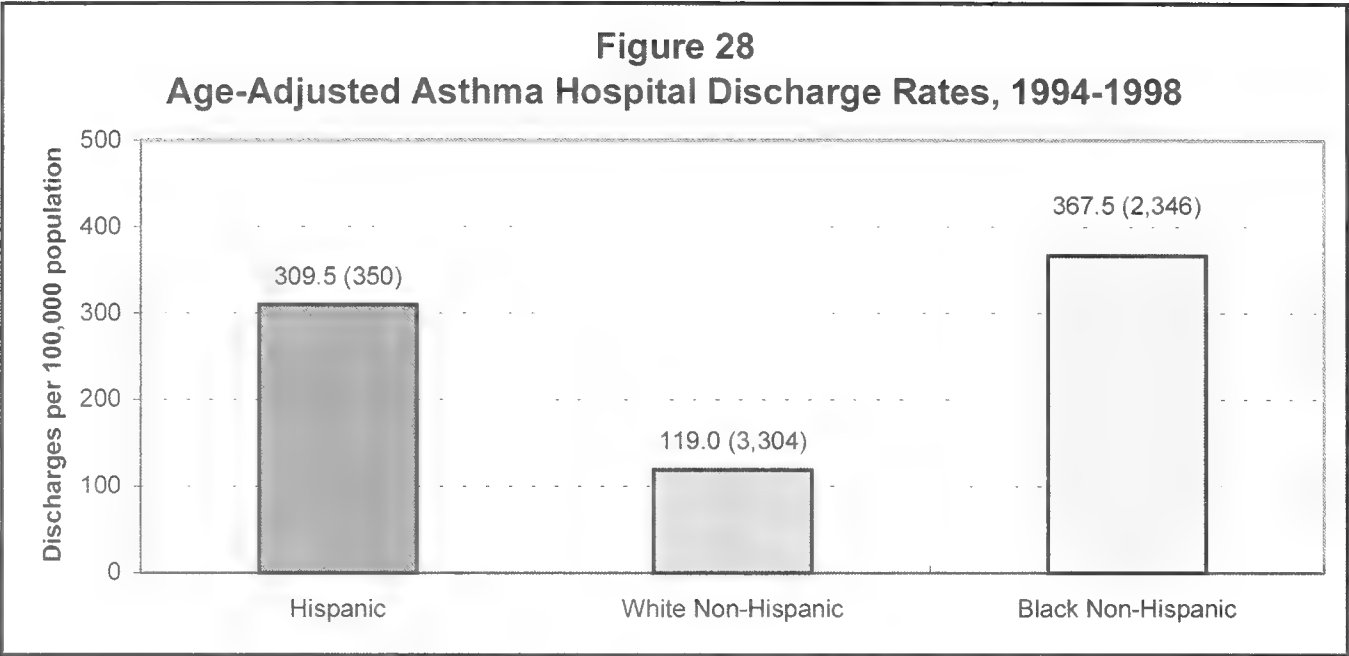
\* Indicates a tied rank.

† Chronic Obstructive Pulmonary Disease

There were 63,478 preventable hospitalization discharges<sup>‡</sup> to Delaware residents from 1994-1998 with 1,457 discharges to Hispanics. Preventable hospitalizations have been studied extensively by Billings and his colleagues<sup>[1,2]</sup> among others. There are over two dozen preventable hospitalization categories, and they are often used as indicators of potential barriers to primary health care. A complete list of categories can be obtained from the Delaware Health Statistics Center (302-739-4776).

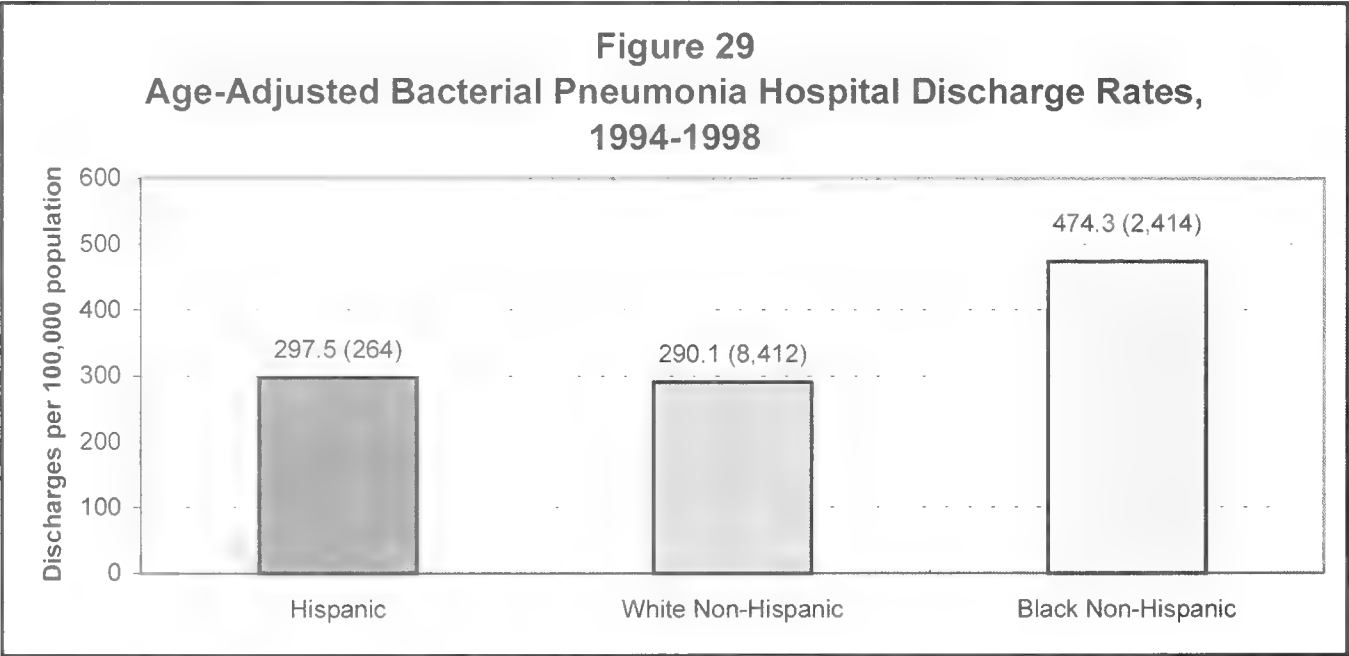
*Asthma* and *Bacterial Pneumonia* were the number one and two preventable hospitalizations for Hispanics, respectively. Diabetes was third among all preventable hospitalizations for Hispanics.

<sup>‡</sup> Preventable hospitalizations are also referred to as "Ambulatory Care Sensitive" conditions. 534 discharges (less than 1% of the total) involved persons of unknown race and Hispanic origin.



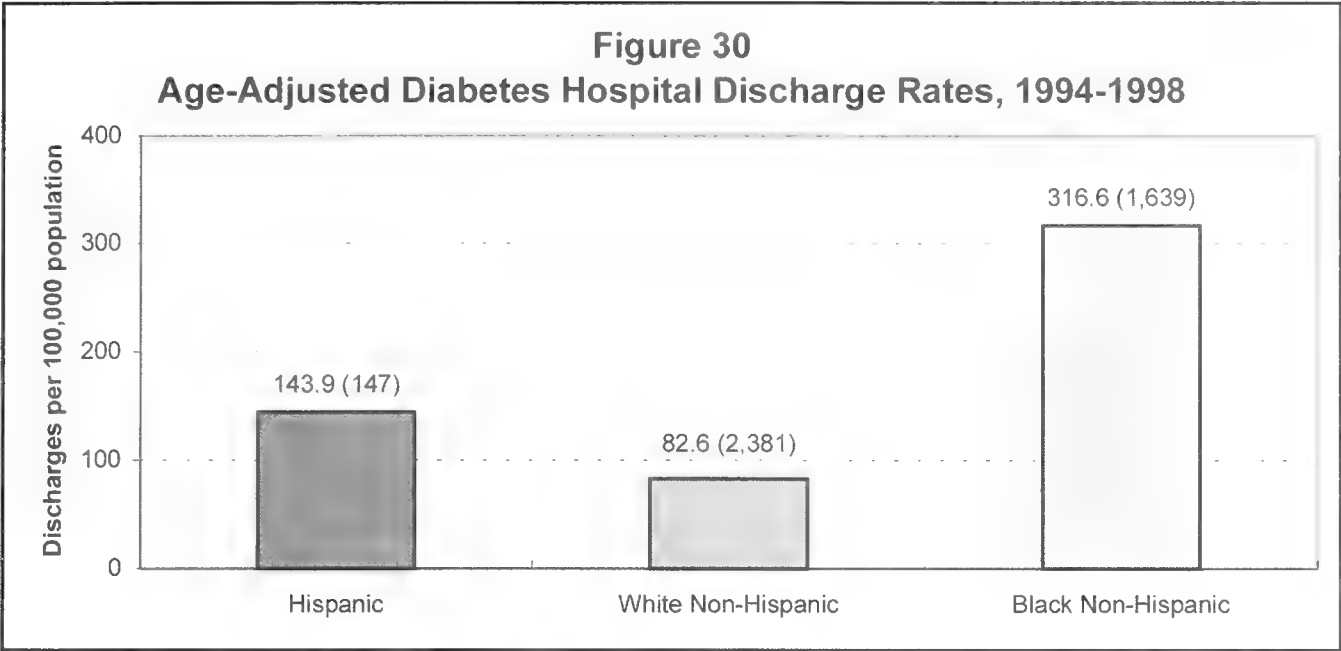
Source: Delaware Health Statistics Center

The *Asthma* hospital discharge rate in Delaware was 2.6 times higher for Hispanics than for White non-Hispanics. The rate for Black non-Hispanics was somewhat higher than for Hispanics. Comparable national data are not available.



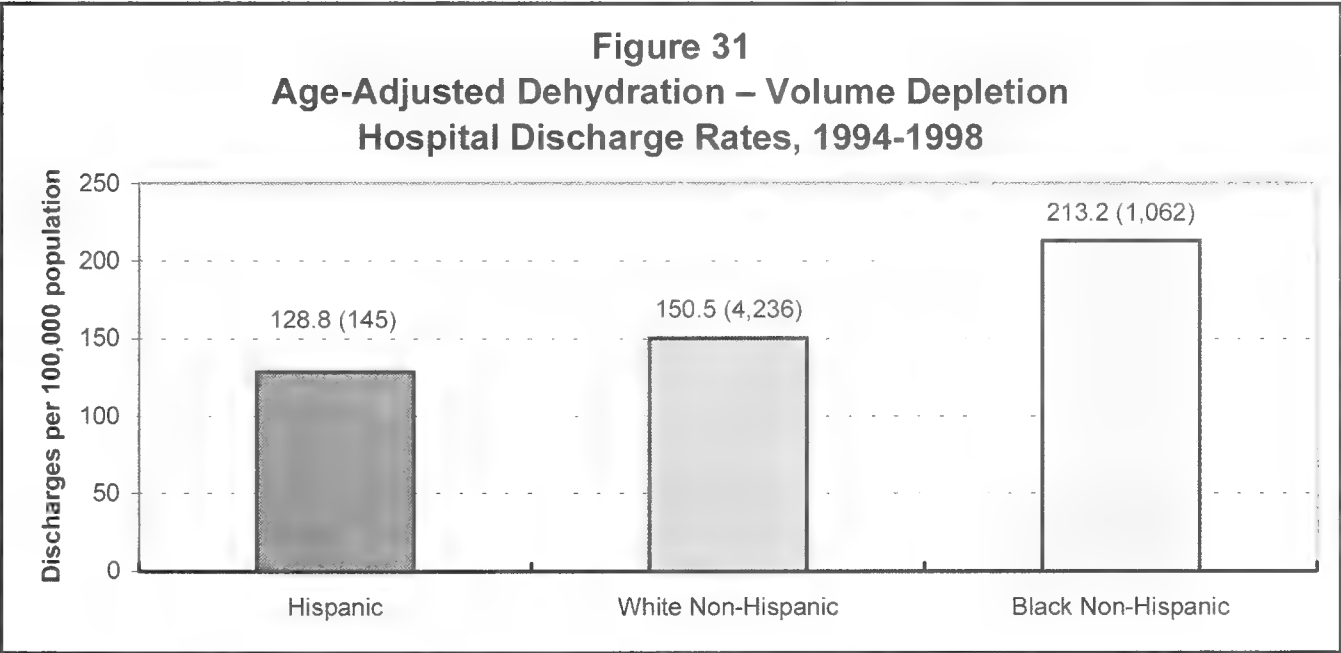
Source: Delaware Health Statistics Center

*Bacterial Pneumonia* hospital discharge rates in Delaware were similar for Hispanics and White non-Hispanics. The rate for Black non-Hispanics was about 1.6 times higher than for the other two groups. Comparable national data are not available.



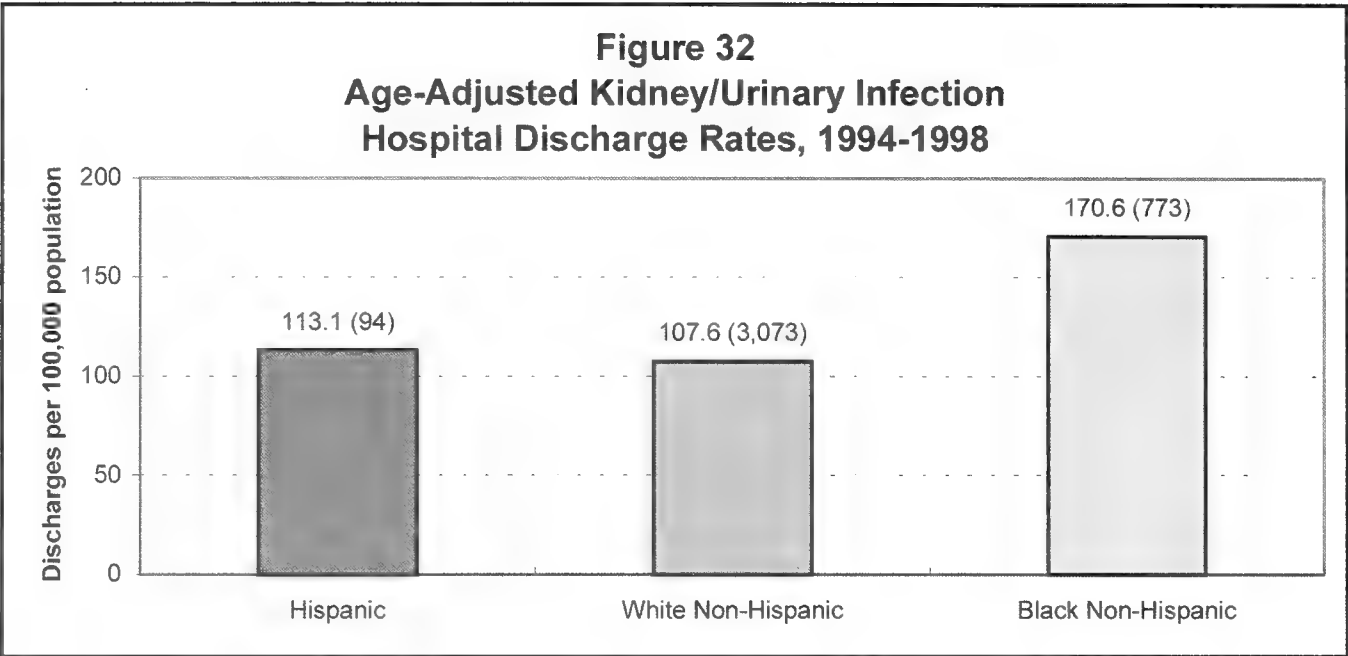
Source: Delaware Health Statistics Center

The *Diabetes* hospital discharge rate for Hispanics in Delaware was 1.7 times higher than for White non-Hispanics. However, the Hispanic rate was less than half the rate for Black non-Hispanics. Comparable national data are not available.



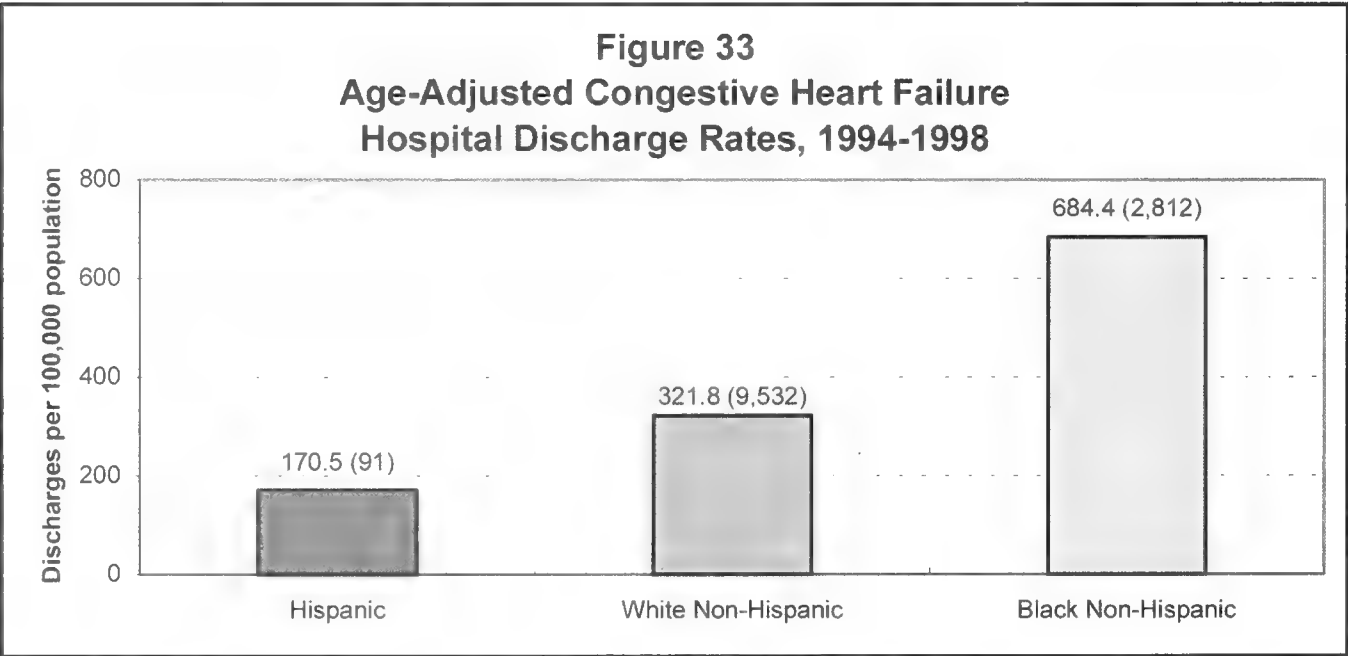
Source: Delaware Health Statistics Center

The *Dehydration – Volume Depletion* hospital discharge rate in Delaware was slightly lower for Hispanics than for White non-Hispanics. The rate for Black non-Hispanics was higher than for the other two groups. Comparable national data are not available.



Source: Delaware Health Statistics Center

*Kidney/Urinary Infection* hospital discharge rates in Delaware were similar for Hispanics and White non-Hispanics. The rate for Black non-Hispanics was higher than for the other two groups. Comparable national data are not available.



Source: Delaware Health Statistics Center

The *Congestive Heart Failure* hospital discharge rate in Delaware was considerably lower for Hispanics than for White non-Hispanics. The rate for Black non-Hispanics was much higher than for the other two groups. Comparable national data are not available.

# Technical Notes





## Technical Notes

### **Sources of data**

The source data for this report include birth certificates, death certificates, inpatient hospital discharge records, and data from the 1990 and 2000 census counts.

Birth and death certificates for all events occurring in Delaware are filed with the Office of Vital Statistics in the Division of Public Health. Births and deaths to Delaware residents that occurred in other states are also received by the State. The inclusion of these data is made possible by an agreement among all registration areas in the United States for the exchange of copies of resident certificates. Therefore, all birth-related and death statistics in this report are based on persons whose residence at the time of the event was Delaware.

Inpatient hospital discharge records from all Delaware hospitals are submitted on a quarterly basis to the Delaware Health Statistics Center within the Bureau of Health Planning and Resources Management. There is currently no exchange agreement among the states for hospital data. As a result, hospital discharges of Delaware residents from hospitals in other states are not sent to the State. Therefore, all preventable hospitalization statistics are based only on events to Delaware residents that occurred in Delaware hospitals.

### **Reporting of Race and Hispanic Origin**

On both birth and death certificates, Hispanic origin and race are reported as separate items with the item regarding Hispanic origin (*Of Hispanic Origin? Yes or No*) appearing immediately before the item regarding race. Since these items are separate, a person of Hispanic origin may report any race (White, Black, etc.). The combination of these two items was used to create the primary categories for this report (i.e., Hispanic, White non-Hispanic, and Black non-Hispanic).

In the inpatient hospital discharge data system, Hispanic origin is included among the race groups. Therefore, a person reported as Hispanic cannot be reported in another category such as Black or White. However, the categories in this system do include White non-Hispanic and Black non-Hispanic so data are essentially comparable to the categories created from the combination of the two items on birth and death certificates.

### **Population Estimates**

A number of the birth-related statistics are calculated based on a percentage of the total births. However, calculation of the teen birth rate as well as all age-adjusted death rates and hospitalization rates required age-specific population estimates.

The primary source for population estimates for this report was the Delaware Population Consortium (DPC).<sup>[6]</sup> The DPC currently produces an annual series of estimates and projections for Delaware by age, sex, and race (All races, White, and

Black). Estimates of the total Hispanic population have also been produced by the DPC for the past few years. However, these estimates do not include the age distribution necessary to calculate the aforementioned rates.<sup>[7]</sup>

In order to produce a set of population estimates that could be used to calculate rates for this report, estimates from the U.S. Census Bureau (USCB) were used in combination with DPC estimates.<sup>[14]</sup>

When compared to the count from the 2000 Census,<sup>[15]</sup> the 1998 DPC estimate of the total Hispanic population appeared to be more accurate than the 1998 USCB estimate. More specifically, the USCB estimates appeared to underestimate the actual Hispanic population in Delaware. Therefore, DPC estimates of the total Hispanic population from 1994-1998 served as control totals. The age-specific Hispanic population was estimated by proportionally applying the age distribution of the USCB estimates<sup>[14]</sup> to the DPC totals. The age-specific Hispanic estimates were further subdivided into race categories (White, Black, and All other races). The age-specific Hispanic estimates by race were then subtracted from the corresponding DPC estimates to obtain estimates of the White non-Hispanic and Black non-Hispanic populations.

### **Age-Adjusted Rates**

All rates in the *Death Statistics* and *Preventable Hospitalization Statistics* sections of this report are age-adjusted using the 2000 U.S. population standard.<sup>[10]</sup> Age adjustment is used to control for differences in the age distribution of persons in two or more sub-populations. Comparisons of age-adjusted rates can only be made when the rates are adjusted to the same population standard.

### **Issues of Small Numbers**

In some cases the number of events for a calculated rate is relatively small. Rates based on small numbers can be difficult to interpret since they are subject to significant random variation. When a rate is based on small numbers, it is pointed out in the text below the graph as a caution to the reader. In all graphs, the number of cases on which the rates are based is included. For more information on random variation and small numbers see Appendix A of the *Delaware Vital Statistics Annual Report, 1999*.<sup>[3]</sup>

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